

EUROPEAN NEWS

Madrid security conference will adjourn

BY OUR MADRID CORRESPONDENT

THE DEADLOCKED Madrid meeting reviewing the Helsinki accords on security and co-operation in Europe agreed to adjourn yesterday from Friday until next Monday in recognition of the stalemate in East-West relations caused by events in Poland.

Haughey is favourite to form government

BY BRENDAN KEENAN IN DUBLIN

MR CHARLES HAUGHEY, the Fianna Fail leader, is still favourite to form a government when the Irish Parliament meets today, but the result could be in doubt until the actual division and the winning margin could be only one vote.

Close Brezhnev aide wins top Soviet honour again

MOSCOW — Mr Leonid Zamyatin, a leading foreign policy spokesman for President Leonid Brezhnev, the Soviet leader, has been awarded the Soviet Union's highest decoration on his 60th birthday, the official news agency Tass said yesterday.

Commission puts pressure on Ten to raise energy taxes

BY JOHN WYLES IN BRUSSELS

EEC GOVERNMENTS are being urged strongly by the European Commission to raise their energy taxes to nip in the bud any complacency among consumers and investors over the current decline in oil prices.

Spanish coup bid 'had royal backing'

By Tom Burns in Madrid

THE controversy surrounding the court martial in Spain of the officers implicated following last February's coup attempt heightened yesterday when the first defendant to face a cross-examination, General Jaime Milans del Bosch, repeated allegations that King Juan Carlos supported the rebellion.

King's opinions

Gen Milans del Bosch claimed he was told that the King had backed action during conversations with Gen Armada on a skiing holiday in the Pyrenees.



Gen Milans del Bosch

Belgian steel strikers juggle with time bomb

Giles Merritt reports from Brussels on the crisis at Cockerill-Sambre

IF THE grim outlook for Cockerill-Sambre — Belgium's crisis-ridden, strikebound steel-making giant — were translated into British terms, then the livelihoods of well over 1m people in the UK would today be at risk.



Previous steel sector cutbacks have produced angry confrontations in Brussels between police and steelworkers.

The parallel should not be taken too far. But it does explain why the future of what at first sight looks to be just another ailing European steel producer is in reality a political time-bomb that the Belgian Government is treating with extreme caution.

group will not be allowed to safeguard employment until that 1985 date. Britain has since 1979 lost more than 40 per cent of its steel jobs. France a quarter and Belgium only 7 per cent.

Taxes rise in Greek budget

By Victor Walker in Athens

GREECE'S new Socialist Government last night introduced a property tax and increased a wide range of other taxes in an attempt to combat inflation which last year reached 25 per cent.

West may revise position on Polish debt

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT

SIGNATURE OF the agreement between Poland and Western banks to reschedule debts outstanding from last year might prompt Western governments to reconsider their own hard-line attitude towards Poland.

Poland failed to meet an earlier February 15 deadline, partly, the central bankers said, because it encountered unexpected difficulty in finding Western export markets for its coal production.

Flowers recall Warsaw University purge

BY CHRISTOPHER BOBINSKI IN WARSAW

FLOWERS WERE laid and a few candles lit yesterday at a plaque just inside the gate of Warsaw University commemorating the breaking up of demonstrations and a subsequent purge of staff and students there 14 years ago this week.

Women's Day, making it impossible to distinguish the obligatory flowers being carried to women friends and colleagues and those carried for political purposes.

W. German protest party gathers strength

BY JAMES BUCHAN IN BONN

THE GREENS, West Germany's small but shrill protest party, has given sharp warning of the threat it poses to the Government parties in regional elections this year.

At the weekend, however, a group of left-wingers known as the "Frankfurt Circle" and headed by Herr Erhard Eppler, the SPD disarmament champion, made clear they would press at the party congress in April for discussion of Schleswig Holstein's motion for a moratorium on all new intermediate range missiles.

Vietnamese attack corners Khmer Rouge forces

BY KATHRYN DAVIES IN SINGAPORE

VIETNAMESE forces and Kampuchean loyalists to the Phnom Penh Government of President Heng Samrin have launched a major offensive and succeeded in pinning down Khmer Rouge guerrillas in western Kampuchea close to the Thai border.

According to the Thais, a fierce battle continued yesterday following a weekend assault by the Vietnamese which is reported to have caused heavy casualties. In addition, Vietnamese troops are said to have been exchanging artillery fire with Thai forces close to the frontier town of Aranyaprathet.

Thailand says villages on its side of the border have been bombed from Kampuchea and that two civilians were killed while fleeing the battle zone.

This is the first time since they ousted the Khmer Rouge in December 1978 that the Vietnamese have posed a serious

China has protested to Vietnam over what it describes as a serious incident last week in which several Chinese fishing boats were shelled by Vietnamese naval vessels in the South China Sea, Tony Walker reports from Peking.

Accusing Vietnam of having launched a "brazen attack," the Chinese say one fishing boat exploded after being hit by a shell and another burst into flames.

The New China News Agency says some 18 people are missing from the boat that exploded, a threat to Khmer Rouge enclaves in the mountainous region of western Kampuchea.

The Thais say that Vietnamese troops have established forward bases in areas they have overrun, although the Khmer Rouge is still holding significant territory. The Thais say they will fire back across

the border at the Vietnamese if they feel that Thai territory is under attack.

But the Khmer Rouge may now have little option but to retreat from their remaining bases and regroup in Thailand. Apart from raising the spectre of a mass influx of refugees similar to that of November 1979, the Vietnamese offensive suggests that Hanoi is telling the five-nation Association of South East Asia Nations that its diplomatic efforts to solve the Kampuchean issue may soon become irrelevant.

Thailand, together with its Asian partners, Singapore, the Philippines, Malaysia and Indonesia, wants the 150,000-strong Vietnamese force to leave Kampuchea and a neutral, preferably non-Communist government to be installed in Phnom Penh. But a military victory by the Vietnamese and their Kampuchean allies would render this highly unlikely.

CHINA STREAMLINES BUREAUCRACY

Trade overlord appointed

BY TONY WALKER IN PEKING

CHINA HAS created a new super Trade Ministry as a result of a streamlining of the national bureaucracy which is now taking place.

The new Ministry will incorporate the old Ministry of Foreign Trade, the Ministry of Economic Relations, the State Administrative Commission on Import and Export Affairs, and the State Foreign Investment Commission. It will be known as the Ministry of Foreign Trade and Economic Relations.

The new Minister will be 61-year-old Chen Mubua, the highest-ranking woman in the state apparatus. The previous Minister for Foreign Trade, Zheng Tuobin, will become a Vice-Minister in the new Ministry.

Apart from the creation of the new Ministry, the Standing Commission of the National People's Congress, China's parliament, which concluded an important meeting in Peking yesterday, announced the appointment of a number of new Ministers, the abolition of 11 Vice-Premier posts, and the

disbanding of several Ministries and commissions.

The moves are part of the streamlining of the bureaucracy which was launched as a national campaign about a month ago. Among the commissions to be abolished are the State Agricultural Commission, the Capital Construction Commission, the Machine Building Industry Commission and the Energy Commission and the financial and commercial group under the State Council, China's Cabinet.

Responsibilities of these commissions will be taken over by other Ministries and the State Economic Commission will have its functions strengthened. Other Ministries affected in the shake-up are those of Power and Water Conservancy, which will be merged, and the Ministry of Commerce which will take over the operations of the all-China Federation of Supply and Marketing Co-operatives and the Ministry of Food.

Among veteran officials who lose some of their responsibilities is Gu Mu, a Vice-Premier,

who sees control of the State Administrative Commission on Import and Export Affairs and the State Foreign Investment Commission pass to the new Trade Ministry.

Mr Gu, who is in his late 60s, also faces the prospect of losing his Vice-Premiership as a result of the planned reduction to two. Another apparent casualty of the bureaucratic streamlining is former Commerce Minister Wang Lei, who was criticised about a year ago over his practice of eating in one of Peking's best restaurants without paying the full cost.

Meanwhile, the Standing Committee of the National People's Congress has released details of tough new regulations to combat what the Chinese describe as "economic crimes." Those engaging in crimes such as smuggling, profiteering and speculating in black market currency face execution.

The death penalty has been introduced to cover abuses of special position by state functionaries under the present



Gu Mu: displaced in the sweeping changes

Seoul plans to liberalise investment

South Korea plans to allow some direct foreign investment in the local stock market from 1985 and to fully liberalise it in the 1990s, according to a Finance Ministry report to parliament. Reuter reports from Seoul.

Two local trust companies last year launched South Korea's first overseas mutual funds, worth \$30m, through the London-based Merrill Lynch International Bank and Crédit Suisse First Boston.

South Korea, which hopes to increase such investment funds, plans to establish a \$50m investment corporation in the U.S. next year to help issue the funds.

Zimbabwe trial

The first of an expected series of treason trials involving Zimbabwean whites alleged to have plotted against the black majority Government opened in Bulawayo yesterday. Reuter reports from Salisbury. Four men were led before the High Court in handcuffs and leg irons charged with conspiring to foment rebellion in the province of Matabeleland.

Peking invitation

French and Chinese communists have prepared the way for restoring relations between their two parties, and China has invited French party leader, St Georges Marebais, to visit Peking. AP reports from Peking.

Singapore deficit

Singapore's trade deficit widened to \$51.817bn (\$637m) in January from \$51.595bn a year earlier, the Department of Statistics said yesterday. Imports fell 6 per cent to \$55.117bn while exports fell 15 per cent to \$53.33bn. Total trade slowed.

Violence becoming a 'respectable option' for S. Africa's blacks

BY J. D. F. JONES IN JOHANNESBURG

NEW EVIDENCE about the attitudes of South African blacks to such vital issues as their support for the banned African National Congress, the role of the tribal "homeland" leaders, and the prospect of violent revolution, are contained in the Buthe-led Commission report, which has just been released.

The commission, which recommends a system of black-white power-sharing for Natal and KwaZulu (and by implication similar arrangements elsewhere in the republic), hired

professional research organisations to carry out two attitude surveys of cross-sections of the population in both Natal and KwaZulu and elsewhere in the country.

The report suggests that this material will "form useful guides to what is possible" in the changing political scene in South Africa—where it repeatedly emphasises the urgent need for movement and reform.

A few of the findings are: The true strength of the various black leaders is obviously of great importance.

The new research shows that the ANC leaders and Chief Gatsha Buthezi himself are overwhelmingly the most popular, though with wide regional variations.

In KwaZulu and Natal, Chief Buthezi, who is Chief Minister of the KwaZulu homeland and also leader of the Inkatha Zulu-based Mass party, was given 59 per cent support in response to a "spontaneous" question asking who are "the real leaders of the black people," compared with 17 per cent for the "ANC leaders." On the Witwatersrand the ANC

leaders overtake him with 43 per cent while the Chief drops to 17 per cent. Even on the Witwatersrand the local leaders, Dr Nkomo Motlana and Bishop Desmond Tutu, can only muster 7 per cent and 6 per cent respectively.

The ascendancy of Chief Buthezi and the ANC also emerges from separate questions that were asked on the Rand and which can be compared with earlier research by a German team in 1977 and by two other studies in 1979 and 1980. This comparison shows that in the past five years the ANC has strengthened its position

and is undisputed first in a rank-order.

In trying to gauge the militancy of the black majority, the commission found that in asking whether "nothing will work except bloodshed," the positive response differed widely: All Natal 21 per cent, all Witwatersrand 31 per cent, Soweto 41 per cent, graduates 70 per cent, Inkatha/Witwatersrand 38 per cent.

The commission says: "These results show that violence as an alternative is fast becoming a 'respectable' option. We have identified the scope of what appears to be a growing

climate of revolutionary ideology."

The author of this part of the report, Professor Lawrie Schlemmer, admits that he did not put the option of "internal uprising" because he thought it too extreme. What he found was spontaneous mention of "either bloodshed, internal war or revolution" to between 88 per cent and 100 per cent. He concludes: "The overwhelming consensus on this terrifying expectation is very noteworthy indeed. Revolution is certainly no longer the topic only of frustrated intellectuals and armchair radicals."

When questions were put about black attitudes towards the tribal homeland "nation-states," the responses were overwhelmingly negative. Clear majorities agree the KwaZulu should not exist and that it should become part of a wider South Africa.

The commission also concludes that tribalism has a stronger attraction than is often believed. "There is substantial minority pride in ethnic identity... but near majority concern that ethnic characteristics should not be obliterated in a political dispensation."

Danger of hostilities 'has eased,' Israelis say

BY DAVID LENNON IN TEL AVIV

THE DANGER of hostilities breaking out between Israel and Palestinian forces in Lebanon appears to have receded, according to Israeli officials, who yesterday met Mr Philip Habib, the U.S. presidential envoy who has been touring the region in an effort to preserve the ceasefire.

The envoy was sent back to the Middle East last week, when an Israeli invasion of Lebanon appeared imminent, following an incursion by Palestinian guerrillas from the West Bank.

Officials in Jerusalem said yesterday that Mr Habib had reported to Mr Yitzhak Shamir, the Foreign Minister, that from

his talks in Lebanon, Syria, Jordan and Saudi Arabia, he had the clear impression that all parties were interested in maintaining the ceasefire.

Mr Shamir assured Mr Habib that, as long as the current calm was preserved in the North, Israel would not do anything to disturb the situation. He repeated Jerusalem's warning that, if attacks are launched against Israel by the guerrillas, Israel would respond.

The U.S. envoy was due to meet Mr Menachem Begin, the Prime Minister last night and Mr Ariel Sharon, the Defence Minister, today before flying back to Washington.

Bahraini spending reduced

By Mary Frings in Bahrain

THE DEPRESSED state of the oil market has forced a 10 per cent spending cut on the Bahrain Petroleum Company, which owns and operates the island's refinery with an output of 250,000 barrels a day. The company is a 60-40 joint venture between the Bahrain Government and Caltex Petroleum.

Mr Dou Hephura, the chief executive, said that in view of reduced profit margins forecast for 1982, a modernisation programme was being slowed down although no major project was being cancelled. The light isomate project was going ahead on schedule for completion in May 1983.

Similar budget reductions are expected to be made by the Bahrain National Oil Company, which is responsible for exploration, production and local marketing, and the Bahrain National Gas Company, whose liquefaction plant produces propane, butane and naphtha from associated gas.

Petrol prices went up at Bahrain's petrol stations yesterday, by 25 per cent for 98 octane premium grade and 50 per cent for 92 octane. Premium now costs 75 fils a litre (about 50p a gallon) and regular 50 fils a litre (about 40p a gallon).

UN news body's 'appetite for funds' denounced

By David Tonge

BRITAIN yesterday launched its first open attack on a new United Nations body which it had hoped would help developing countries with their news communications.

Mr Douglas Hurd, Minister of State at the Foreign Office said in London yesterday that the International Programme for the Development of Communication had shown that its "appetite for funds is far greater than its willingness to work on a clear and sensible role for itself." It should not become a new international fund, he said.

His criticism comes six weeks after the IPDC, a body grouping 35 rich and poor nations, held its first meeting in Acapulco, Mexico.

The IPDC was set up in 1980, by a conference of the UN Educational, Scientific and Cultural Organisation in the midst of growing acrimony over developing countries' calls for a "new information order."

Britain, the U.S. and West Germany saw their demands as threatening press freedom. They hoped the IPDC would take some of the sting out of the debate.

In Mexico the IPDC agreed to provide nearly \$1m (\$249,000) to support 17 projects in developing countries. Demands for help totalled \$80m, though pledges from developed countries, the Arab world and Eastern bloc totalled only \$3m.

Sinai border disputes studied on the ground

BY OUR TEL AVIV CORRESPONDENT

DISPUTES over the demarcation of the international border between Israel and Egypt after the final Israeli withdrawal from Sinai next month were examined on the ground yesterday by Mr Kamal Hassan Ali, Egypt's Foreign Minister, and Mr Ariel Sharon, the Israeli Defence Minister.

Most of the disputes concern only a few yards of territory, but in Rafah on the Mediterranean coast and at Taba on the Red Sea problems are more complex, involving human and financial hardships.

The town of Rafah straddles

the international border which runs across its main street. Strict adherence to the border line drawn by Britain and Turkey in 1906 would mean the destruction of over 150 houses and the separation of families living on either side of the frontier.

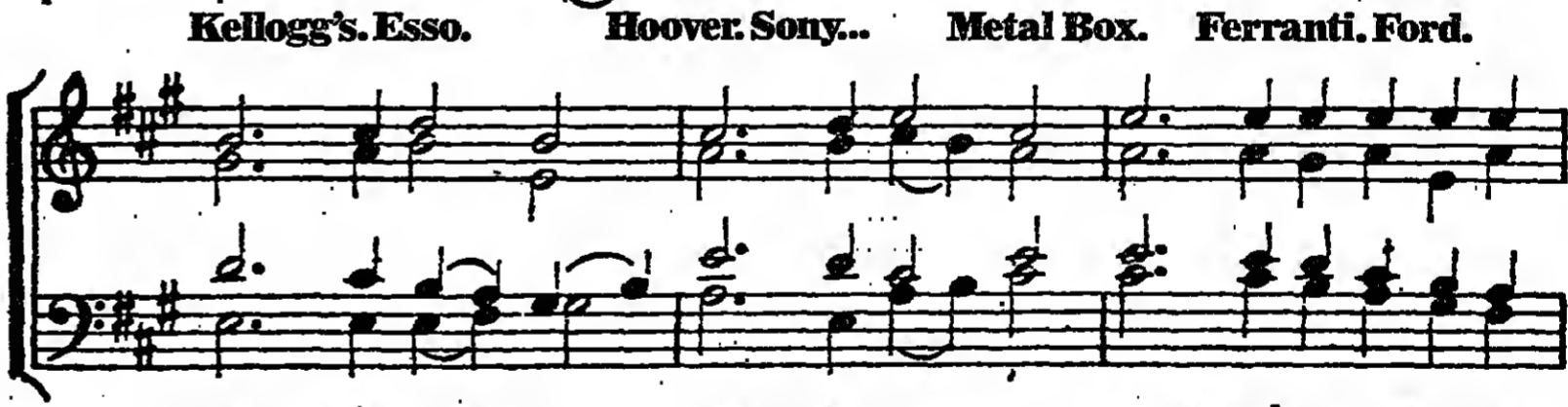
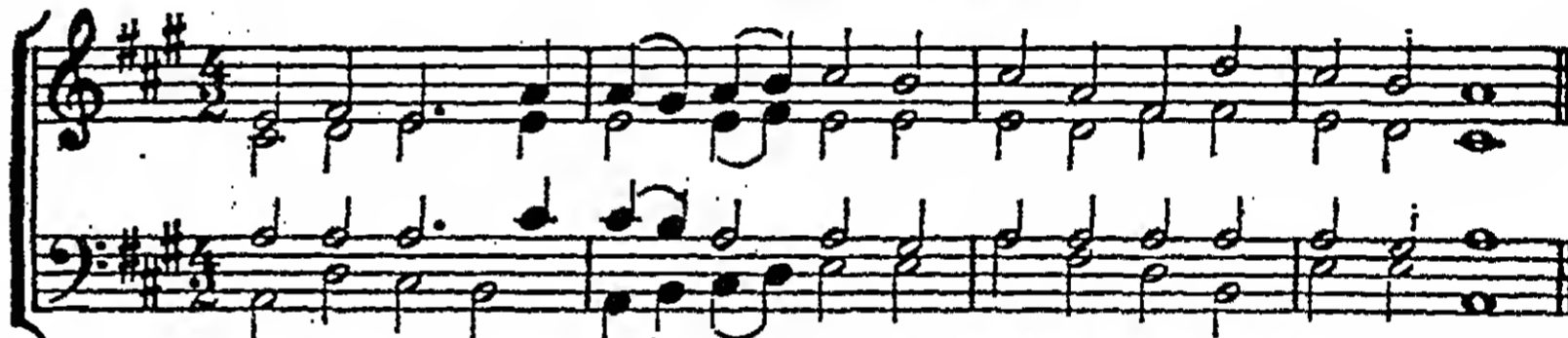
At Taba, near Eilat on the Red Sea, there is a dispute about where the border runs. If the Egyptians insist on their interpretation, then an Israeli holiday village and a hotel still under construction will end up on the Egyptian side of the border. Israel wants them to remain on its side.

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13 1/2% per annum.

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AMERICAN NEWS

Genscher wants stronger Nato talks procedure

BY REGINALD DALE, U.S. EDITOR IN WASHINGTON

HERR Hans-Dietrich Genscher, West German Foreign Minister, yesterday proposed strengthening consultation procedures in the Atlantic Alliance by instituting a new series of informal meetings of Nato Foreign Ministers.

He made the proposal in talks with Mr Alexander Haig, U.S. Secretary of State, the main purpose of which was to prepare a number of Western ministerial and summit meetings in the coming months.

Herr Genscher's suggestion is that the 15 Nato Foreign Ministers should meet alone, without advisers, once or twice a year — in much the same way as Foreign Ministers of the European Community have done for some years.

The aim would be to try to reduce strains in the alliance in

formally before they develop into major public disputes. Mr Haig was yesterday still considering the proposal, but he was said to believe that it might be a good idea.

Bonn would like the proposal to be discussed at the spring meeting of Nato Foreign Ministers in Luxembourg next month, and endorsed by the Nato summit due to be held in Bonn in June, which President Ronald Reagan is planning to attend.

The West German initiative is intended to be a follow-up to last month's call by Sig Emilio Colombo, the Italian Foreign Minister, for a more formal friendship pact between the U.S. and Western Europe.

While acknowledging that strains exist in the alliance, West German officials said Herr

Genscher would repeat during his two-day Washington visit that Bonn has no intention of going back on its decision to participate in the 5,000 km Siberia-Western Europe natural gas pipeline that has angered Washington.

The deal was now done and nothing could change it, and Washington was now beginning to understand this, the officials said. The same point will be made to Mr James Buckley, the U.S. Under-Secretary of State for security assistance, science and technology, who is due to visit Western Europe soon.

Herr Genscher did not discuss with Mr Haig recent suggestions in Congress that a move might be made to withdraw some U.S. troops from Western Europe, largely in retaliation for the pipeline deal.

Guatemala military candidate leads poll

GUATEMALA CITY — Gen Anibal Guevara, the Guatemalan Government's military candidate, yesterday emerged ahead of three civilian candidates as counting continued in Guatemala's presidential elections, which have been boycotted by the left.

Gen Guevara, a former Defence Minister, had about 43 per cent of the votes counted, according to information released by the Government agency in charge of elections communications.

Sr Mario Sandoval Alarcon, the candidate of the extreme right-wing National Liberation Movement, was running second, with 27 per cent of the votes. Running third was Sr Alejandro Maldonado Aguirre, backed by a coalition of the Christian Democratic Party and the National Revolver Party. Last was Sr Gustavo Anzueto Vielman of the Authentic National Centre.

Sr Alarcon called a Press conference to complain that results announced differed from what his party's observers counted at the polling places and demanded a recount.

Sr Maldonado Aguirre, considered the most moderate of the four right-of-centre candidates, also called a press conference at his home, and accused the government of "retention" of results.

No figure has been issued on how many Guatemalans voted. The latest returns represented counting from only 35 of the 52 polling places in the capital and less than a third of the 327 municipalities nationwide.

Agencies Anotole Kalesky in Washington adds: The U.S. Government has repeatedly stated that an "honest and clean" election in Guatemala is likely to be a prerequisite for the resumption of large-scale military and economic aid.

Only a token amount of military aid to Guatemala is at present pencilled into the Reagan Administration's 1983 budget request, but Mr Alexander Haig, the U.S. Secretary of State, has strongly suggested that much bigger support could be made available to a government with more democratic legitimacy than that of President Romeo Lucas Garcia.

David Tonge previews the resumed Law of the Sea conference

Tough U.S. line on sea-bed mining

THE U.S. yesterday returned to the Law of the Sea conference in New York with a list of demands opposed by almost all 150 countries involved.

The conference is preparing a treaty on the world's oceans and, after a year's review, the Reagan Administration has finalised details of the changes it wants in the 180-page draft text which has taken eight years to negotiate.

The changes concentrate on the régime which will govern the mining of billions of dollars' worth of potato-shaped nodules of manganese, nickel, cobalt and copper lying on the deep-sea bed.

But developing countries have warned that, if necessary, they will sign a treaty at the resumed United Nations Law of the Sea conference in New York without U.S. participation.

The U.S. position reflects the concerns of companies such as

U.S. Steel, Lockheed and Kennecott, which have invested much of the \$300m (£109m) so far spent on deep sea mining.

In the past two weeks, Britain has emerged as a bridge between the U.S. and the Third World. British companies such as Consolidated Gold Fields and Rio Tinto Zinc share U.S. concerns.

"If the treaty came in without any changes, it would be a serious deterrent," Mr Gavin Moncrieff of CGF said yesterday. But they are less disturbed than the U.S.

The British Government insists on the importance of the treaty for the movement of warships or oil tankers, for defining countries' rights off their shores and for preventing the Law of the Sea becoming the Law of the Jungle," as one diplomat says.

Mr Douglas Hurd, Minister of State at the Foreign Office, said yesterday that Britain had been

trying to ensure that proper negotiations took place on U.S. concerns.

However, Britain has also been under considerable pressure in the past few days from Washington — and a few British companies — to sign an interim treaty with the U.S., West Germany and perhaps France.

This interim treaty would harmonise the national legislation passed by the four main mining countries and allow their companies to share out the seabed until any Law of the Sea Treaty came into force.

The interim treaty is strongly opposed by developing countries. The Foreign Office has been insisting that signing it now would limit Britain's ability to help the U.S. put across its concerns in the UN conference.

The U.S. is determined to ensure that its companies will be guaranteed access to the deep-sea bed and not have unfair competition from the multinational enterprise envisaged in the draft treaty which will also mine the sea bed.

It is insisting on a "fair and adequate" decision-making role in the bodies controlling deep sea mining. It also wants to ensure that the treaty cannot be amended without its consent; at present the UN conference works by consensus.

Setting out U.S. concerns in London last week, Mr James Malone, U.S. Ambassador to the conference, left open the possibility that the U.S. might accept satisfaction of less than all of its demands.

Sr Alvarez De Soto of Peru, chairman of the group of 77 developing countries, said yesterday that, regardless of the U.S. position, the Law of the Sea conference must finish next month, unless its mandate from the UN General Assembly is revised.

Chemical attacks 'in Afghanistan'

WASHINGTON—Mr Walter Stoessel, U.S. Deputy Secretary of State, said yesterday that more than 3,000 people have been killed by Soviet chemical weapons attacks in Afghanistan.

Mr Stoessel also told a Senate Foreign Relations Sub-committee that Soviet troops had "engaged in wanton looting and killing" in Kandahar, the second largest Afghan city, and that there were reports of torture by Soviet and Afghan troops.

"As a result of chemical attacks, 3,042 deaths attributed to 47 separate incidents be-

tween the summer of 1979 and the summer of 1981 have been reported," he said.

Analysis of all the information available had led them to conclude that substances used included irritants, incapacitants, nerve agents, phosgene and perhaps mycotoxins and mustard.

Afghan military defectors had provided information on Soviet use of chemical weapons containing deadly nerve agents, including where they were stockpiled, and when and where they had been used, he added.

Mr Stoessel did not provide

further details in his statement, but his allegations were the toughest the Reagan Administration has made on the use of chemical warfare against anti-Communist Afghan insurgents.

Mr Stoessel also told the committee that the department believes the Soviet union had about 100,000 men in Afghanistan. The previous estimate had been around 80,000.

The boost in forces reflected the "increased difficulty that the Soviets are having," he added. The Soviet Union militarily intervened in Afghanistan in December 1979. Agencies

Andrew Whitley in Brasilia studies the effect of an economic anomaly

Brazil's banks profit from recession

LAST WEEK'S announcement that Brazilian interest rates were unlikely to fall this year came as welcome news to the country's bankers. They have grown fat in a period of high interest rates at a time when recession has forced the industrial sector into a state of financial crisis.

The disparity between the performance of the banks and the manufacturing sector—bank profits tripled in 1981 while gross domestic product fell sharply—has embarrassed the Government, which to a large extent determines interest rates. It has also produced a bitter dispute between Sr Antonio Delfin Neto, Brazil's economic overlord, and his own think-tank, the Getulio Vargas Foundation.

A comprehensive survey conducted by the authoritative business newspaper *Gazeta Mercantil* revealed that net profits in the banking sector grew last year at a nominal rate of 242 per cent, equivalent in real terms to nearly 114 per cent when inflation is discounted.

Privately-owned banks performed spectacularly. Average profits rose by 427 per cent compared with the results declared at the end of 1980.

The federal and state-owned banks, with about half the total deposits of the big league of 40 banks, did less well in profit terms because of the much greater demands on them to lend at subsidised interest rates to government-favoured sectors, such as agriculture and housing. Their profits only rose by 161 per cent before the inflation adjustment.

Whichever way the banks turned last year they made money. If they were lending to private industry from their cruzero resources, they benefited from the wide "spread" between the domestic money market's buying and selling rate; if they were purchasing government securities, they benefited from the vast increase in the public deficit; if they were borrowing money abroad to lend at home they coined it, with fees and interest

charges to the customer, measured in dollars, averaging 30 per cent.

There were also a number of windfalls, such as the central bank's decision to reduce substantially the reserve requirement for bad debts.

Eliminating the once-off benefits, and bearing in mind that it will be concentrating on fiscal measures this year rather than money market operations, this year's balance sheets will not be quite so inviting. But they will still be encouraging.

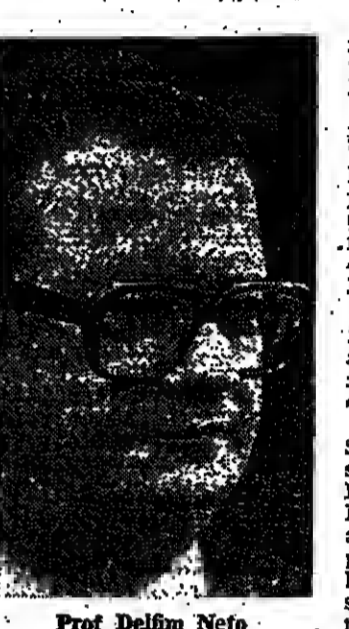
Sr Pedro Conde, president of the Brazilian Federation of Bank Associations, told the *Gazeta Mercantil* that while the first half's results should be "reasonable enough" given that last year's basic conditions have not changed, those for the second half would not be so good.

After declining gently last year, Brazilian domestic interest rates are moving up again. The present market rate is between 118 per cent for prime customers and 140 per cent for others. Taxes of 15 per cent are added—this against an inflation rate which fell in February to a 12-month rate of 93 per cent.

The Government admits that it policy to keep interest rates high, to maintain the attractiveness of foreign borrowing and encourage domestic savings. To the pleas of private industry that interest rates are leading Brazil to an Argentinian-style financial disaster, Sr Delfin coolly replies that idle capacity alone should be sufficient to generate a 5 per cent growth in gross domestic product in 1982.

As the Brazilian economy picks up again from last year's slump, credit demand will undoubtedly increase, putting further pressure on the harsh loans ceiling imposed by the central bank. This remains at last year's level of 50 per cent growth, with exceptions for priority areas.

The extent to which some banks were able to slip out of the corset was highlighted by



Prof Delfin Neto

main channel for the attraction of foreign exchange into Brazil.

A prime instrument for this policy was the requirement that 70 per cent of all cruzero lending be directed towards private, Brazilian-owned companies. Short of credit, the multinationals and state-owned companies were forced to borrow abroad.

Brazil, met its gross borrowing requirement comfortably, and the banks, Brazilian and foreign, profited handsomely at every stage of the operation.

The Bank of London and South America, a Lloyds Bank subsidiary, did extremely well. But by contrast, Citibank and Banco Lar Brasileiro, the Chase associate, performed relatively poorly. In fact, the Brazilian balance sheets of the dozen or so foreign owned banks conceal the fact that most profits on dollar lending to Brazil accrued back in New York, London and Tokyo. Access to funds was important in giving their local branches an edge over a Brazilian bank borrowing abroad from a third party, but fees and commissions are the same for everyone.

Brazil is now said to be the number one profit area, worldwide, for both Citibank and Chase Manhattan, with the former's "exposure" here unofficially put at \$4bn.

The *Gazeta Mercantil* analysis of 1981 balance sheets showed how the foreign-owned banks based in Brazil were among the most profitable, but grew at a slower rate than their local rivals in terms of deposits.

Foreign banks have simply had to try harder and be more efficient.

Perhaps most remarkable of all about the extraordinary profits Brazilian banks are currently reaping is the absence of any protest, or outcry, whether from the government, the press or suffering industrialists.

"How can the National Confederation of Industry criticise the banks?" said Sr Albano Franco, its president, "when we consider ourselves to be a champion of profits."

Mexican unions seek wage rise

MEXICO'S trade union movement started talks yesterday with the Government and the private sector over increasing wages to take account of the inflationary impact of the peso's depreciation since it was floated on January 17.

The inflation rate in Mexico before the peso was floated was estimated at about 30 per cent this year, but could be as high as 50 per cent, according to Sr Jesus Silva Herzog, Deputy Finance Minister.

The peso has slipped 40 per cent against the U.S. dollar since the Mexican central bank allowed the currency to float,

and was yesterday trading at between 45 and 46 to the dollar. Sr Silva Herzog said the Government hopes to persuade unions to take a pay rise lower than the extra increase in inflation.


The unions, most of who are closely allied to the ruling Institutional Revolutionary Party, have not stated the amount they are seeking. But they want to break by a substantial amount the 35 per cent ceiling fixed before the devaluation.

Yesterday's talks coincided with the announcement by the Bank of Mexico that the rate of

inflation actually dropped a little last month. The national consumer index rose by 3.9 per cent, compared with 5 per cent in January. But the figure was largely based on pre-devaluation prices.

The central bank also lowered interest rates on short-term peso deposits this week by 2 per cent, the sharpest decrease since the Bank of Mexico started its policy of fixing the rates weekly in 1979.

Many private companies have high dollar debts and have been calling for lower peso interest rates to help them overcome their problems.



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CONSOLIDATED BALANCE SHEET AT DECEMBER 31, 1981

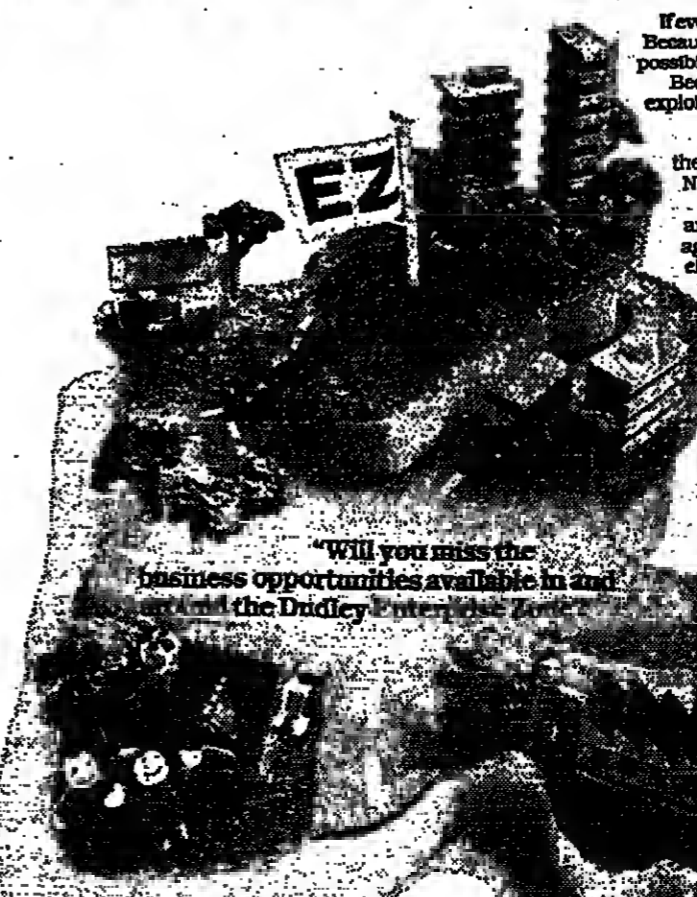
| | US\$ 1,000 | C\$ 1,000 |
|---|------------|-------------|
| ASSETS | | |
| Cash, Central Bank, Government Bonds and | | |
| Due from Banks | 164,320 | 21,000,035 |
| Credit Operations | 1,103,978 | 141,088,381 |
| Allowance for Possible Loan Losses | (13,034) | (1,665,739) |
| Other Assets | 230,212 | 29,421,114 |
| Fixed Assets and Leases of Equipment | 51,669 | 7,370,099 |
| | 1,543,145 | 197,213,890 |
| LIABILITIES AND STOCKHOLDER'S EQUITY | | |
| LIABILITIES | | |
| Deposits and Acceptances | 840,745 | 107,447,219 |
| Funds Borrowed-Domestic | 98,416 | 12,577,582 |
| Funds Borrowed-Resolution 63 | 176,570 | 22,565,603 |
| Funds Borrowed-Foreign | 77,335 | 9,883,488 |
| Other Liabilities | 194,858 | 24,902,854 |
| | 1,387,924 | 177,376,716 |
| MINORITY INTEREST EQUITY | | |
| | 2,222 | 283,942 |
| STOCKHOLDER'S EQUITY | | |
| Capital | 28,951 | 3,700,000 |
| Reserves | 124,048 | 15,853,232 |
| | 152,999 | 19,553,232 |
| | 1,543,145 | 197,213,890 |

CONSOLIDATED STATEMENT OF INCOME - YEAR ENDED DECEMBER 31, 1981

| | US\$ 1,000 | C\$ 1,000 |
|--|------------|--------------|
| Operating and Non-Operating Income | 579,267 | 74,030,425 |
| Operating and Non-Operating Expenses | (422,661) | (54,016,014) |
| Monetary Correction of Permanent Assets and Stockholder's Equity | (9,188) | (1,174,287) |
| Donation to Fundação Safra | (2,382) | (304,497) |
| Income before Income Tax | 145,036 | 18,535,627 |
| Income Tax Expense | (62,254) | (7,956,086) |
| Net Income | 82,782 | 10,579,541 |
| Net Income Appropriated to Minority Interests | 201 | 25,673 |
| Net Income Appropriated to Controlling Interests | 82,581 | 10,553,868 |

Note: Exchange rate C\$ 127.80 per US\$ 1 Independent Auditors: Price Waterhouse

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Kreisky irate over lay-offs by foreign investors

BY PAUL LENDVAY IN VIENNA

CHANCELLOR Bruno Kreisky, leader of the ruling Austrian Socialist Party, has fuelled growing concern about the implications of foreign investments.

He gave notice to the chairman of the board of BMW, the West German motor group and Siemens, the electrical giant, that neither the federal state nor the local authorities would provide large and extremely advantageous investment subsidies if the subsidiary plants of the companies in Austria dismiss domestic labour on a big scale.

The intervention of Dr Kreisky was provoked by the break-up of a much-publicised diesel engine joint venture between BMW and Steyr-Daimler-Puch of Austria. The Government is clearly worried that the policy of major concessions to foreign investors may backfire.

According to a statistical survey compiled by the National Bank, enterprises under foreign control sacked between 1975 and 1979 3,000 Austrian workers. Total employment by 1,700 foreign-controlled companies was 287,000.

According to the survey, 29 per cent of Austrian industry and 6 per cent of the rest of the economy is controlled by foreign investors. West Germans account for 34 per cent of the foreign capital invested in Austria, followed by Switzerland and Liechtenstein (31 per cent) and the U.S. (12 per cent).

Dr Kreisky's Socialist Government has been proud of attracting a number of major foreign investors.

The BMW-Steyr venture involved the construction of a large diesel engine plant near the city of Steyr in upper Austria with an annual capacity of 200,000 engines.

A few days ago, the two sides agreed that BMW takes over the 50 per cent of the Sch 800m (226.6m) equity. The £200m project was to be assisted by federal and local investment grants, totalling the equivalent of £30m.

Chancellor Kreisky was furious that he had not been properly informed about the changes in ownership and that the West German partner had not been willing to commit itself in a binding form in the joint production of a diesel engine motor.

Tokyo seeks review of export insurance

By Our World Trade Staff

THE JAPANESE Ministry of Trade and Industry is asking its advisory body, the Export Insurance Council, to review the export insurance system.

The review is necessary, Miti said yesterday, because of the increasing risks of non-payment by some recipients of Japanese exports and investments.

Miti's disclosure of further evidence of the financial strain which has afflicted the major export insurance agencies following the economic difficulties of countries like Iran, Sudan, Zaire and now Poland.

The trend became evident in 1980 when half the members of the Berne Union, which brings together export credit insurers, declared deficits.

Japan's payments to exporters because of events in Poland are estimated at between ¥15-20bn (up to \$4.6bn). Last year, by comparison, the Export Credits Guarantee Department in the UK paid out \$60m.

Export insurance payments rose sharply in Japan last year, and according to Miti, appear to have exceeded receipts. Premiums for Japanese exporters have remained unchanged for seven years.

But Miti denied a Japanese Press report that it plans to double the present level of insurance premiums and create a new system of rates which vary according to particular market risks.

The present premium rates run from 0.55 to 1.0 per cent of the value of the goods being exported. The ECGD's rate for exports sold on short-term credit runs between 0.4 and 0.5 per cent.

Industrialists, quoted by news agencies, said that one factor behind the review of current premium rates is the growing expectation that heavy payments will have to be made to compensate Japanese companies hurt by the failure to complete the Bandar Khomeini petrochemical complex in Iran.

Used machine tools find ready market

BY LORNE BARLING

THE FLOOD of second-hand machine tools resulting from the recession in Britain has provided a rich source of export for Hubberts, a family-owned West Midlands company, which specialises in reconditioning machinery before selling it abroad.

Suggestions that these exports are somehow undermining UK industry are dealt strongly by Mr Graham Knowles, managing director, who points out that much of the equipment is outdated but suitable for developing countries where labour costs are low.

However, many buyers insist on thorough reconditioning before shipment, since component failures are costly in countries where spare parts may not be available and engineering skills are limited.

Hubberts, a leading buyer at the recent sale of Tsbol's major car plant at Linwood, estimates that 30 per cent of its profits are generated by these exports, compared with 15 per cent 18 months ago. But the market is highly competitive and the number of dealers has increased.

Mr Knowles believes that his company, which is involved in steel stockholding and a range of industrial services such as machine installation and transport, has an advantage over dealers since it can offer guarantees to overseas buyers.

Many of its machine tools are exported on delayed-payment terms, with part of the sum involved being held for a

period by the buyer to ensure reliability of the goods.

The company's acquisition of 12 large power presses and other items from Linwood at a cost of around £400,000, is paying off rapidly. Four of the presses have been shipped to a Japanese motor manufacturer in South Africa, while the rest are in stock awaiting shipment.

The company has around 100,000 sq ft of storage space

transport them by road from elsewhere in the U.S.

However, the U.S. recession has slowed demand recently and Hubberts has been looking at other markets more seriously, particularly in the Middle and Far East, where it has made a number of sales.

"Dated machine tools often find a ready market abroad, since they are easy to operate, unlike modern multi-operation

In the Far East, Singapore is regarded as a prime market, while the growing manufacturing base of the region as a whole is creating demand for good quality machine tools.

Within Europe, there is an increasing trade in more modern equipment, particularly in the sale of reconditioned machine tools back to their market of origin, especially West Germany, Scandinavian countries

took an increasing proportion of the company's sales.

One of the problems now affecting the UK market, he suggests, is the growing inter-company trade in machine tools, keeping them off the open market.

"If a plant is shut down, the contents will often be offered to a nearby company which will be happy to pay a low price for a few machines which fit into its production lines," one dealer said.

Hubberts, which also specialises in giving a full appraisal of machine values to companies disposing of them, also stands to benefit in these circumstances if it wins the reconditioning work involved.

Mr Knowles warned, however, that overseas buyers should beware of buying any second-hand equipment.

He gave the example of a South African company which bought a second-hand conveyor system in the UK which cost more, when shipped and installed, than a completely new one. In these circumstances, he suggests, the advice of an experienced supplier is valuable.

The major source of second-hand machinery in Britain has been the motor industry, which has undergone major rationalisation in the past two years, but the increased pressure on industry to become more productive will ensure a continued flow of second-hand machinery, dealers believe.



Exporters at Work

There is enormous potential demand in countries such as India, where industrial development is demanding new equipment, but this is being limited by foreign currency shortages. Similar prospects in Nigeria, other African countries and South America are limited by import controls. In the Far East, Singapore is regarded as a prime market, while the growing manufacturing base of the region is creating demand for good quality machine tools.

machines, and prices are comparatively low despite transport costs," Mr Knowles said.

He believes there is enormous potential demand in countries such as India, where industrial development is demanding new equipment, but this is being limited by foreign currency shortages. Similar prospects in Nigeria, other African countries and South America are limited by import controls.

have recently been good buyers of a wide range of equipment.

Hubberts, which has a total turnover of around £10m, has recently abandoned a policy of selling up a number of warehouses abroad for machine storage, having decided to close one on the U.S. east coast.

Mr Knowles said it was felt that this was too costly and that a good service could be provided by dealing direct with U.S. customers and dealers, who

U.S., Japan to hold talks on trans-Pacific air rights

BY CHARLES SMITH, FAR EAST EDITOR, IN TOKYO

JAPAN and the U.S. will make a final attempt to resolve their differences over trans-Pacific air traffic rights at a week-long conference which starts tomorrow near San Francisco.

The object of the conference will be to put together a package agreement covering such matters as the designation of a fifth U.S. airline to fly the Pacific, together with improved and expanded rights for Japan Air Lines.

The U.S. has also demanded that Japan should give its consent to a more flexible pricing system. But Japan appears to have strong reservations on this point.

If the conference succeeds, the result will be to end almost a year of deadlock which culminated last December in the announcement of "provisional" sanctions by each government against the other's airlines.

Failure of the talks, on the other hand, might mean that the U.S. and Japan will cease to be on speaking terms where aviation is concerned.

The U.S. has emphasised that it sees a link between the air talks—which are basically about the right of each nation's airline to carry money in the other's market—and the more highly publicised frictions over bilateral trade.

Japan-U.S. aviation relations

became tense in the middle of 1981 when Japan failed to approve the designation of United Airlines to fly the Pacific and instead began to air its own dissatisfaction with what is claimed to be a serious "imbalance of opportunity" in the existing Japan-U.S. air services agreement.

Points in the agreement which are causing particular annoyance to the Japanese include the "reservation" of several U.S. destinations, including Seattle and Chicago, for service by U.S. airlines only.

Japan Air Lines also claims that it is severely restricted in the area of "fifth freedom" rights to fly beyond the U.S. to other countries—whereas U.S. airlines are free to serve other Far Eastern destinations beyond Japan.

Japan Air Lines calculates that, because of the imbalance, its earnings from routes covered by the existing agreement totalled around \$900m (2473m) in 1980 whereas U.S. airlines collectively earned \$1.5bn.

Figures compiled by the U.S. Department of Transport present a strongly contrasting picture. They credit Japan Air Lines with an earnings advantage of about \$50m over the four U.S. airlines covering the region.

Italians angry over Yacyreta criticisms

By Jimmy Burns in Buenos Aires

THE LATEST salvo in the acrimonious battle over Argentina's multibillion Yacyreta hydroelectricity project on the Parana river has been fired by Impreglio of Italy.

Sr Adolfo Mochkotsky, Impreglio's acting general manager in Argentina, rejected criticisms of unfair trading practice.

Both Impreglio and Dumex, of France, at the head of local consortiums, have been bidding for the major civil works contract for Yacyreta. Last November, after a year of protracted negotiations, the Joint Argentine-Paraguayan management board responsible for the project recommended that the civil works contract should go to the Italians.

However, a final decision expected in February has been delayed apparently because of disagreements over costs involving local officials and the project's two major creditors, the World Bank and the Inter-American Development Bank (IDB).

Impreglio confirmed that its bid had been \$1.7bn, and that this had been \$360m more than the rival bid made by Dumex. However, Sr Mochkotsky denied allegations of seeking to influence local politics.

Since 1969, Impreglio has won four major contracts for hydroelectric projects in Argentina: El Ancon, Planicie Bandurita, Saita Grande, and Alicura.

Dumex has so far failed to establish a foothold in Argentina and has accused Impreglio of exercising a de facto monopoly within the hydroelectricity sector.

But Impreglio has denied that Dumex was placed in a disadvantageous position when it came to explaining its bid to Yacyreta's joint management board.

According to Sr Mochkotsky, the decision to award the final contract was based on the view that the French bid had qualifications which were unacceptable to the board.

These included a demand that the cost-adjusting mechanism contained in the contract should not be binding, and that the time schedule for the completion of the project should be modified.

Impreglio's comments came amid reports that the World Bank had disagreed with the IDB by raising objections to the Italian bid.

Yacyreta is already running several years behind schedule and the overall costs have risen to an estimated \$10bn from the original \$4.5bn.

The view of both the World Bank and the IDB, as yet undisclosed publicly, is crucial since the banks' prospected direct financing of nearly \$450m implies additional large sums in co-financing.

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UK NEWS

Why a quick return to exchange controls would mean chaos

THE POUND is sinking fast on the foreign exchanges. At an emergency Cabinet meeting, the Governor of the Bank of England is summoned to receive his instructions.

The teams of officials who until October 1978 used to man the exchange-control department at the Bank are back at their desks, ready to put the new regulations into practice.

Mr Moolenaar, who left the Bank two years ago to work on the cash management side at Imperial Chemical Industries, says that controls might be brought back either by a Labour or Social Democratic government, and even by the present one if a pre-election scare emerged on the foreign exchanges.

David Marsh looks at the possible effects of one Budget option

Mr Moolenaar keeps in touch regularly with his ex-colleagues. Of the formerly 700-strong exchange-control department, about 400 gather every six months for a reunion.

thing is so horrendous that the old exchange controllers just wouldn't play ball. The Bank, he says, had pressed the Government for two years to abandon exchange controls before the Conservatives took the decision.

troys all the files on companies and their currency operations any would-be controllers would have to "start again from scratch."

Licensed dealing proposals welcomed

BY JOHN MOORE, CITY CORRESPONDENT

TOUGH Department of Trade proposals governing licensed dealers and investment managers have been welcomed by the body representing them.

The association agrees with the need for a clear investment management — including the separation of accounts — are accepted. The association agrees with the need for a clear investment management agreement between an investment manager and his client.

Livingstone plea for LT aid rejected

BY LYNTON McLAIN, TRANSPORT CORRESPONDENT

THE GOVERNMENT rejected a request from the Greater London Council yesterday for help to avoid the doubling of London Transport fares on March 21.

The talks ended without any agreement and with bitter words and personal attacks from both sides.

Mr Livingstone said the talks had not taken the dispute any further forward. "I cannot see anything which has been said today which will persuade the trade unions not to strike on Wednesday."

nged the GLC to find out how Londoners could get better bus and Tube services for the present amount of money available to LT and a greater choice in the services.

It said there was a "serious lack of clarity" on two main issues: The extent to which LT has an obligation to meet the needs of London for efficient, effective and economic public passenger transport services.

Arguments for nuclear stations outlined

By David Fishlock, Science Editor

NUCLEAR power stations were the most economic way of generating electricity, provided they were built within the expected time and cost, a senior British government official told Japan's nuclear industry yesterday.

The three new nuclear stations Britain expected to commission this year would each save about £100m a year compared with coal-fired stations, Mr Ivor Manley, deputy secretary responsible for electricity at the Department of Energy, told the annual conference of the Japan Atomic Industrial Forum.

Wool textile industry tells Government its needs

BY ANTHONY MORETON, TEXTILES CORRESPONDENT

THE WOOL textile industry yesterday put a six-point plan to the Government to restore its competitiveness and maintain its position as an exporter.

The confederation's deputations sought to impress on the minister the disadvantages suffered by the UK industry compared with the industry in France, West Germany and Italy.

It also drew attention to a lack of unity in European Economic Community policy and the way in which other European governments assisted their own industries.

Construction volume lowest since 1961

BY ANDREW TAYLOR

VOLUME of construction output in Britain last year fell to its lowest level since 1961. Department of Environment figures show that output fell by 12.3 per cent.

New work fell by 13.3 per cent while repair and maintenance activity, previously a growth sector, declined by 10.3 per cent.

One of the worst affected sectors was public housing where output fell by almost 37 per cent reflecting government spending cuts. Since 1979 annual output has fallen almost 57 per cent.

Loss to Access by fraud rises 76%

BY WILLIAM HALL, BANKING CORRESPONDENT

FLAUNT AGAINST Access, the largest credit-card operation, cost the company 76 per cent more in money lost last year than in the previous year, and rose to £3.3m.

obtained credit cards. The number of women cardholders is growing faster than men. Women now account for 39 per cent of the cardholder base, compared with 27 per cent seven years ago.

Government reprieves two assault vessels

By Bridget Bloom, Defence Correspondent

THE GOVERNMENT has reversed its decision to phase out the Royal Navy's two amphibious warships as part of the effort to cut naval spending.

Lord Blakenham

LORD BLAKENHAM, who died of a stroke at the weekend aged 71, was a former Conservative Party chairman and Labour Minister.

His life was one of virtually continuous political service. An alderman on the London County Council before that war, he became Conservative MP for Woodbridge, Suffolk, in 1945.

CP Trim rescue attempt

BY JOHN GRIFFITHS

NORTHERN IRELAND Development Agency officials are expected to consider today proposals for maintaining CP Trim, the Belfast-based De Lorean supplier, as a going concern.

CP Trim is understood to be making adequate profits on the turnover — approaching £10m a year — provided by the De Lorean business. It had been trying to diversify into other products to lessen dependence on De Lorean.

Personal bank loans rise

BY OUR BANKING CORRESPONDENT

THE BOOM in personal lending by High Street banks is being reflected in a rapid increase in their share of the consumer credit market at the expense of finance houses and other traditional lenders.

in the fourth quarter of 1981, AGB Index, which monitors financial transactions in the personal sector, estimates that the consumer credit market, excluding home loans, rose by 14 per cent compared with the same period of 1980 to £6.7bn.

offset by a reduction in overdrafts from 4 per cent of the total market to 2 per cent over the period from the final quarter of 1980 to 1981.



Mrs Doris Wheatley

Making money from gobbledegook

EVERYONE is faced at some time with trying to understand explanatory leaflets on how to fill in tax forms or to operate complicated electronic gadgetry.

Elaine Williams reports on a Cambridge company which simplifies communication

Cambridge Communication's several client organisations include Sony, English China Clays and the European Commission.

scientifically to record successfully. Mrs Wheatley sees a large market. She also sees a range of opportunities in providing better communications between employers and workforces.

'Real hopes' of lower mortgage interest rate

BY WILLIAM COCHRANE

THERE ARE real hopes that the mortgage interest rate will be much lower by the end of the year, Mr Alan Cumming, chairman of the Building Societies Association, said yesterday.

Mr Cumming said: "It is encouraging that interest rates are on the way down. Hopefully, this year, we will be able to get our rates down and keep them down."

Food companies face stiff foreign competition

BY GARETH GRIFFITHS

THE FOOD and drink industry has been outstripped in productivity by overseas competitors, according to a National Economic Development Office report published today.

NEDO undertook a series of international comparisons, with particular emphasis on companies in West Germany.

The UK industry performed relatively well against other sectors of the economy but had been caught in a vicious circle of much lower levels of value added per head, lower investment, slower growth rates, and less efficient use of capital.

Not all the shortcomings were its own fault. Low profit margins and a squeeze on costs imposed by the efficient large-scale retail chains have led to food and drink manufacturers often not making what they consider sufficient returns on investment. Poor quality packaging led in some cases to breakages disrupting production lines.

The report was produced by NEDO's food and drink manufacturing economic development committee.

Its prescriptions for improving productivity are long term—more emphasis on training, greater consultation between management and employees, and a more aggressive attitude to companies to growth opportunities, particularly exports.

Sir James Cleminson, Reckitt and Colman's chairman and the committee's chairman, said he did not envisage any substantial reduction in the industry's workforce from pursuing the policies outlined.

Aerospace industry unites to back a new fighter aircraft

The Government cannot ignore this initiative, says Michael Donne

THE AEROSPACE industry is spending several million pounds of its own money on the early stages of design and development of a fighter aircraft for the late 1980s—the British Aerospace P-110.

This will have a multi-role capability for high-altitude air-to-air combat and low-level battlefield support, although it is aimed initially at meeting the RAF's replacement requirement for a replacement for its 200 ageing Jaguar fighters — the RAF's requirement is known as Air Staff Target 403.

It will be a single-seat, twin-engine, super-sonic delta-winged aircraft, using developments of the Rolls-Royce RB-199 engines powering the Tornado multi-role combat aircraft, which it is intended to complement in squadron service. It will have short take-off and landing capability.

The P-110 would be an attractive aircraft for many overseas

countries, especially in the Middle East. The aerospace industry believes it would generate substantial export sales over a long period.

The industry is united in wanting to see such an aircraft developed. It believes the P-110 will be necessary militarily in the late 1980s and that it will fill a gap in military aircraft procurement in the period when Tornado production will be running down.

It also thinks the P-110 could provide employment for up to 50,000 when in full production. This is one reason the project is supported so widely. Not only British Aerospace and Rolls-Royce are putting in money, so are equipment companies such as Dowty, Ferranti, Smiths Industries and Marconi Avionics, with many others involved or expressing interest.

The total development cost of the P-110 eventually could be as much as £1bn, so sooner or

later Government and RAF involvement will be necessary. The companies have been discussing the venture with the RAF and Defence Ministry for some time, but so far there is no government commitment.

The industry has also been having talks with possible collaboration with companies overseas, both in Western Europe and the Middle East and on investment from countries such as Saudi Arabia and Jordan. Both have expressed interest.

Developing a European Combat Aircraft (ECA) was discussed with the West German and French aerospace industries, governments and air forces, but foundered because of differences about performance requirements and time-scale.

Nevertheless, it is believed the accolade of an RAF order, with a UK Government cash commitment, will be the most likely way of getting the aircraft launched. This is why the industry is so anxious to see the talks with Whitehall press ahead.

The P-110 will be much cheaper to develop than the Tornado. This is largely because it will be using much of the equipment developed for that aircraft, including the Rolls-Royce RB-199 engines.

A feature of the P-110 will be the extensive use of new materials. About 40 per cent of the airframe will be made from carbon fibre. Another feature will be electronic controls ("fly-by-wire") instead of the control rods used in civil and military aircraft.

The emphasis in the design will be to get a versatile, rugged and comparatively low-cost fighter, without sacrificing performance. Work is well ahead on the design, which it is hoped can be completed this year.

The engineers are working on costs and possible work-sharing arrangements with potential collaborators, so much of the work normally done in a new project—feasibility studies, project definition and initial design—will be completed before any Government cash is involved.

This could help to shorten the overall development time-scale and the cost to government funds.

What the P-110 really means, however, is that for the first time for many years the aerospace industry has taken the initiative.

Proposing a new combat aircraft to the RAF is not new, but financing its initial design and development at a cost of several million pounds is, especially since the P-110 is an industrywide venture.

It is an initiative neither the RAF nor the Government can ignore. The aerospace industry is just as good—if not better—as Whitehall planners in discerning long-term trends in military aircraft design and development.

The P-110 incorporates the essence of this thinking as well as much of what the RAF wants to see in its next military aircraft. Its specification, contained in AST-403, has been circulated widely throughout the industry.

Any eventual aircraft that emerges may not necessarily look precisely like the P-110, but much of the preliminary work has been done, cutting both the cost and time-scale.

Cash and carries seek drinks boost

BY GARETH GRIFFITHS

BRITAIN'S cash and carry companies aim to boost their share of the drinks trade after the brewers' tied house system has been reviewed by the European Commission.

The cash and carry sector believes it will be able to compete successfully with brewers supplying pubs with wine, spirits and packaged beer. Most brewers require tenants

Offer to Laker passengers qualified

BY ALAN FRIEDMAN

cash and carry companies hoped to double the amount of drinks business they control.

Mr Len Jackson, federation director, said cash and carry operators sold drinks more cheaply than brewers, the end of the tie would give the public greater freedom of choice and lower prices as national distribution costs continued to rise.

MR ROLAND "Tiny" Rowland, chief executive of Lounho, yesterday qualified his offer to pay up to £700,000 to reimburse passengers who lost their money when Laker Airways collapsed last month.

Mr Rowland, who is working with Sir Freddie Laker to plan a new airline, said cheques were

not being sent out against all claims, which would amount to several millions of pounds. Instead, the claims would be dealt with on a "pro rata" basis after the liquidators have first considered them and paid such dividends as may be available.

Mr Rowland said: "Since I made the offer in a television interview, checking and sorting the claims has taken time; we are date-stamping the individual claims as they arrive."

Many travel agents had written to Mr Rowland asking him to compensate passengers whose bookings they handled. "I can't do that," said Mr Rowland.

He said his £700,000 offer had been a "spontaneous gesture of feeling for Sir Freddie."

Ship's rust-proofing was 'disastrous,' court told

BY RAYMOND HUGHES, LAW COURTS CORRESPONDENT

CLAIMS totalling more than £1.5m were made in the Commercial Court yesterday against the manufacturers of an anti-rust product.

The court was told that when the inside of ballast tanks on a ship were coated with Bitufux, manufactured by Waites Dove Bituminastic, a member of the Dufay group, the results had been "nothing short of disastrous."

Waites Dove is being sued by P & O, owners of the 15,000-ton Gandora, built by Swan Hunter Shipbuilders, QC, for P & O told Mr Justice Parker that in September 1976, five months after the vessel had been delivered, the Bitufux coating broke down and repairs were carried out to some of the tanks by Waites Dove in July 1977.

In October 1977 there was a further breakdown, as a result of which all the tanks had to be re-coated with a different material. Normally such a coating would be expected to last eight to 10 years.

P & O had sued Swan Hunter, but that dispute had been settled. Swan Hunter had agreed to pay £750,000 and costs.

P & O now claimed about \$855,000 from Waites Dove, against whom Swan Hunter had a claim for the £750,000.

Waites Dove is contesting the claim, and the case is expected to last four to six weeks.

Mr Evans said that P & O's claim against Waites Dove was based on alleged breach of warranty and negligence, arising from the claims made for Bitufux in the manufacturer's data sheet.

Expert witnesses for P & O and Swan Hunter were agreed that Bitufux was totally unsuitable for coating ballast tanks. It was not watertight and had poor adhesion.

Waites Dove's experts would suggest that the fault had developed because of contamination of the tank surfaces by salt and sulphur from the atmosphere before the Bitufux was applied.

The hearing continues today.

Big companies to switch from oil to coal heating

BY MAURICE SAMUELSON

EXPRESS DAIRIES and Dunlop are among leading UK companies planning to switch from oil to coal for heating and process work according to the National Coal Board's marketing department.

The two companies are named by the board after its division closed that Imperial Chemical Industries is to convert a large factory in the North-West from oil to coal to provide process heat.

The board is hoping that ICI's switch to an energy purchaser will influence other big users to return to coal despite the world oil glut.

ICI, which is to spend £8.5m on converting to coal at its soda ash factory at Lostock, Cheshire, said yesterday this would enable it to supply the UK market for soda ash and to make profit able



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Computerised security monitoring station opens

BY NICK GARNETT, NORTHERN CORRESPONDENT

THE FIRST computerised central station for monitoring security in industrial, commercial and private properties was opened in Manchester yesterday as the precursor of a system which will eventually cover most of Britain.

Central stations monitor not only emergency alarms at subscribers' companies and homes but also normal daily locking and unlocking procedures at factories, banks and shops and night security patrols.

The station, opened by Mr James Anderton, Manchester's Chief Constable, is run by the U.S. company ADT Security Systems.

The conversion of its existing manual station in Manchester to full automation is linked to the automation of

other stations, including Birmingham and Nottingham as bridging points. A fully automated central station will be opened in London next year.

ADT, which has introduced fully automated centres in Canada and the U.S., said such computerisation allowed a much faster response to alarms on subscriber premises.

Detailed information involving subscribers' equipment, open and close routines and holiday schedules will be held by the computer. Temporary or irregular information, such as the change in a store's opening times, can be fed in by the computer operator.

Mr Anderton, in opening the centre, said burglary was one crime that was not treated seriously enough by the public.

UK NEWS - LABOUR

Labour board cuts 'threat to dockers'

BY BRIAN GROOM, LABOUR STAFF

PROPOSED CUTS in the National Dock Labour Board would prevent it discharging its responsibilities, Mr Ritchie Pearce, chairman of the unofficial National Ports Shop Stewards' Committee, said yesterday.

He said there was a danger dockers and employers in major ports could lose control over some of their own affairs if the present 21 local labour boards were replaced by five regional bodies.

The committee has called for a one-day national dock strike in protest at the proposals. Mr

Pearce said they were a "further whittling away" of dockers' hard-won rights.

The influence of the unofficial committee has declined and there are doubts about its ability to stage an effective strike without the backing of the Transport and General Workers' Union.

Employers fear, however, that it may have found an issue which will win support. Britain's 18,000 registered dockers are nervous about the board's plans, the likelihood of another hatch of voluntary redundancies this year, and

what they fear is growing pressure to alter their unique employment rights.

The labour board, through which employers and union representatives jointly regulate dockers' numbers and working conditions, proposed reducing the number of local boards in a bid to prevent a deficit of £7m building up by 1985.

Mr Pearce, leader of Southampton's dockers, said the interests of Southampton, Weymouth and Poole could suffer because they would be represented by just one employers' and one dockers' delegate in a

new, Bristol-based, South West board. It would include ports in the South, the South West and South Wales.

There is also concern about plans to make port employers, rather than the board, responsible for dockers' medical and welfare services.

The unofficial committee want the transport union to call a special meeting of its docks committee and reject the proposals. Mr John Connolly, the union's national docks secretary, said they would be discussed at the next regular meeting on April 15.

Industrial action call by teachers supported

By John Lloyd, Labour Editor

LOCAL AUTHORITY unions yesterday gave full support to the industrial action planned by teaching unions from Thursday.

The teachers are protesting against the refusal by local authorities to go to arbitration on their 3.4 per cent pay offer. The unions are claiming 12 per cent.

A meeting of the TUC's local government co-ordinating committee agreed that the non-teaching unions would take no action which would impede the effectiveness of the action.

The teachers have said they will cease covering meal breaks, and will refuse to attend meetings with parents outside normal hours.

The co-ordinating committee's statement means that manual workers in schools will be instructed not to assist in keeping the schools open during the lunch breaks, or in any way mitigate the effects of the action. These are expected to include the closure of schools at midday.

Mr Alan Fisher, general secretary of the National Union of Public Employees and chairman of the co-ordinating committee, said after the meeting that the teachers' action was "vital for those local authority groups - who include the administrative and clerical workers - who have not yet settled. The local authority manual workers settled earlier this year for about 7 per cent."

Mr Fisher said: "Local authority and other public service employers must recognise that if strikers are to be avoided in our essential services, they must accept the need for arbitration when negotiations have broken down."

The National Union of Teachers, the largest teaching union, said yesterday it had received informal approaches from a number of education authorities, asking to be exempted from the action on the understanding that they would support the demand for the issue to go to arbitration.

It is understood that the authorities include the Inner London Education Authority, Leeds, Nottingham and Oxfordshire.

British Steel Scottish plant halted over new rosters

BY BRIAN GROOM, LABOUR STAFF

PRODUCTION was halted at British Steel Corporation's Ravenscraig complex in Scotland yesterday, when management carried out its threat to implement new working practices without the approval of the highest union.

Some 3,000 members of the Iron and Steel Trades Confederation walked out after nine men at the Cartas works, 11 miles from the main plant, refused to operate the changes and were sent home.

The stoppage poses a new threat to the loss-making BSC, which has agreed to accept the productivity scheme as essential to the survival of Ravenscraig and Gartcosh in their present configuration, especially given that other major works in the strip products group have already signed similar agreements, and are thus in a position to further improve their cost performance, which is already significantly better than at Ravenscraig and Gartcosh.

Ravenscraig—one of BSC's five key integrated plants—has a wide catchment area for its own products, it supplies steel to the two Scottish plate mills, Clydebridge and Dalzell, and the smaller Glesgarnock works. Yesterday's stoppage also halted work at the Hunterston ore terminal.

The ISTC accused the corporation of breaking the national deal reached on February 3, when the ISTC withdrew its threatened national overtime ban and agreed that local productivity negotiations could take the place of a national wage award.

That deal included a provision for a "flying squad" of national union officials and management to intervene if there was a failure to agree at local level. BSC said it offered this on February 26, but the union says the corporation has broken off negotiations.

Mr Clive Lewis, ISTC divisional officer, said the management's action was "lunatic."

He would seek to have the strike declared official.

The document they first presented ran to 47 pages. We have had two meetings on it. A lot of things in it mean very fundamental change, and it's not something you can agree in five minutes," he said.

Mr Lewis said contentious clauses included one which would cancel all existing agreements, and leave management free to determine management levels. This could mean steelmen working on jobs without sufficient manpower.

The productivity scheme involves 600 redundancies from the workforce of 3,760. BSC says that increases to the lump sum bonus scheme could provide double-figure rises.

BSC said last night that the steelmen had walked out without leaving safety cover. Management had to perform that task. The proposals had been put forward last November, and that there had been plenty of time to reach an agreement.

Irish ferry turns back after blacking at Sealink port

B & I LINE, owned by the Irish Government, was prevented from starting its planned daily Dublin-Holyhead service yesterday as Sealink employees at the North Wales port again blacked the company's ferry, writes Robin Reeves.

For the second time in three days a morning gang of 17 men at Holyhead refused to handle

B & I's ferry, Connacht, and were sent home by Sealink as a disciplinary measure.

The action is being supported by all ten unions at the port which fear the new service will undermine the profitability of Sealink's existing Holyhead operations.

But in contrast to last Saturday, when their refusal to co-

operate in B & I's berthing trials, led to the cancellation of Sealink's own afternoon sailing, yesterday the Sealink ferry St David, left for Dun Laoghaire on time.

The 6,000 tonne Connacht waited just outside Holyhead harbour for more than an hour but was told no morning gang was available. She eventually

decided to return to Dublin, having failed to land the 33 passenger and nine cars on the inaugural trip. This was out of an original booking of 250 passengers.

As a company, Sealink is continuing to insist publicly that the men's action is wrong, that it must maintain an open ports policy.

Key civil servants' union rejects two-year new technology deal

BY PHILIP BASSETT, LABOUR CORRESPONDENT

EXECUTIVE GRADE civil servants have rejected in a close vote the Government's offer of a two-year interim agreement, including a guarantee of no compulsory redundancies, on introduction of new technology in the Civil Service.

The executive committee of the Society of Civil and Public Servants, representing about 100,000 middle-ranking staff, rejected the interim offer by 12 votes to 11.

Though many on the executive thought that the union's failure to mount effective resistance to new technology meant that it had to accept the agreement, the eventual majority were concerned about agreeing to a deal so close to the union's annual conference in the spring.

SCPS conference policy for the past two years has been to reject any deal which did not guarantee absence of job losses. The proposed agreement accepts that an unspecified number of jobs will be lost as

a result of new technology.

The union's rejection of the offer casts a doubt on its overall acceptance by the Council of Civil Service Unions. The Finance and General Purposes Committee of the lower-grade Civil Service Union meets this week on the offer, and if that rejects it too there will be 17 votes out of the council's 69 members against it.

This will increase the pressure on delegates at the special conference to consider the offer of the Inland Revenue Staff Federation. If the IRSF went against its executive's somewhat reluctant recommendation to accept its eight council votes would be enough to form a blocking one-third minority.

If that were the case, then it is likely that the Civil and Public Services Association might go it alone in accepting the deal for its members. The CPSA executive meets on the offer tomorrow.

The IRSF, facing the largest job losses—about 6,500—from computerisation of Pay-As-You-Earn, tells its members starkly in a special bulletin that if the special conference rejects the offer the union must prepare "early strike action."

Mr Tony Christopher, IRSF general secretary, says: "The prospects of mounting a service-wide campaign this year have already been fully explored with the other unions, and there seems little chance of organising an effective joint attack."

The Institution of Professional Civil Servants and the First Division Association have accepted the offer. The full CCSSU meets on it on March 18.

The Government and Civil Service unions submitted terms of reference yesterday for arbitration on this year's pay deal.

The two sides formally failed to agree on the terms. The union side's terms are essentially 13 per cent increases, with an underpinning £12.50 minimum, and the Government's a complex range of pay offers from 0 to 5 1/2 per cent.

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ACQUISITION BY SAB OF EDCON

Introduction
 Unioio Acceptances Limited announces that SAB has acquired 10 984 199 Edcon ordinary shares, representing approximately 88% of the issued ordinary share capital of Edcon. On 2 and 3 February, 1982, approximately 35% of Edcon's ordinary share capital was acquired by SAB from various Edcon shareholders which resulted in SAB becoming the largest shareholder in Edcon. Further Edcon ordinary shares were then acquired by SAB from Liberty Life Association of Africa Limited and its subsidiary, First Unioio General Investment Trust Limited, which increased SAB's shareholding to approximately 60% of Edcon's ordinary share capital and placed control of Edcon in the hands of SAB. Thereafter, further Edcon ordinary shares were acquired from Mr. Sydney Press and his family, resulting in SAB obtaining its present level of shareholding of 88% of Edcon.

Offer to Edcon minority shareholders
 SAB will extend an offer to the remaining shareholders to acquire their ordinary shares in Edcon. It is intended that the offer will take the form of an arrangement to terms of section 311 of the Companies Act, 1973, as amended, to be proposed by SAB between Edcon and its relevant shareholders. The consideration in terms of the scheme of arrangement will be R15 per Edcon ordinary share, to be settled as follows:
 For every 100 Edcon ordinary shares — 250 SAB ordinary shares (to be issued at R4.50 per share) plus R275 in cash

Edcon ordinary shareholders whose holdings are not multiples of 100 ordinary shares will receive the equivalent pro-rata share of the consideration in respect of such holdings, except that fractions of SAB ordinary shares will not be allotted and such shareholders will receive an appropriate cash amount for fractions based on R4.50 per SAB ordinary share.

The Edcon shares will be acquired by SAB cum the Edcon interim dividend of 22 cents per share announced by the Edcon board on 11 February 1982. In this regard Edcon shareholders are referred to the announcement by Edcon dated 5 March 1982 and published simultaneously herewith, in terms of which the Edcon interim dividend has been postponed, in order for Edcon shareholders to be able to consider the offer by SAB.

The SAB ordinary shares to be issued to the Edcon minority shareholders will rank, as from their date of issue, pari passu with the existing issued ordinary shares in SAB, and will rank for the final dividend to be declared by SAB in respect of its financial year ending 31 March 1982.

The above terms of the offer to minority shareholders are the same terms on which SAB acquired control of Edcon.

Underpinning of SAB ordinary shares
 Arrangements have been made for the SAB ordinary shares to which Edcon minority shareholders will become entitled to be underpinned for cash at R4.50 per SAB ordinary share. Edcon ordinary shareholders will be able to renounce all or part of their entitlements to SAB ordinary shares in exchange for R4.50 per share in cash. Edcon ordinary shareholders can thus elect to receive a cash consideration of R1 500 for every 100 Edcon ordinary shares held, in lieu of 250 SAB ordinary shares and R275 in cash.

Opinion of Edcon directors
 The directors of Edcon other than those who are also directors of SAB, have considered the terms of the offer to the remaining shareholders of Edcon. These directors consider the terms of the offer to be fair and reasonable, and recommend that Edcon minority shareholders accept the offer by voting in favour of the proposed scheme of arrangement.

Rationale for the acquisition
 Edcon is the controlling company of Edgars Stores Limited ("Edgars"), owning 50% of the issued ordinary share capital of Edgars. Edgars operates through five separate chains, Edgars, Sales House, Jet, Ackermans and Zimhahwe, and is the largest retailer of clothing, footwear and household textiles in South Africa. At the end of its 1981 financial year, Edgars operated 413 stores throughout Southern Africa with a total trading space of 350 000 square metres. Since that date the Ackermans chain, consisting of 35 stores, has been acquired and this acquisition will increase the trading space of the Edgars group.

The companies within the SAB group operate in various consumer goods and services oriented sectors and the acquisition of control of Edgars is exactly in line with SAB's investment policies and results in the further expansion of its operations in these sectors. This acquisition provides SAB with a significant investment in the retail clothing industry and complements the SAB group's existing activities in the retail sector.

SAB is confident that the inclusion of Edgars within the SAB group will be beneficial to Edgars and its shareholders. Edgars' close association with the SAB group, the major consumer oriented group in South Africa, will enable Edgars to benefit from SAB's financial strength and management expertise.

Management, staff and board appointments
 SAB has full confidence in the management and staff of Edgars and it is not expected that the acquisition will result in any management and staff changes. Messrs R. J. Goss and W. S. MacFarlane, directors of SAB, have been appointed to the board of Edcon and Mr. A. D. F. Bellamy, managing director of Edgars, has been appointed to the board of SAB.

Effect on SAB
 If SAB adopts the conservative policy of writing off in full at the time of acquisition of Edcon the excess of the purchase consideration over the net book value of the assets acquired, then the equity book value per SAB ordinary share will show a small decline, estimated at approximately 5%, as at 31 March 1982.

It is not expected that the acquisition will have any immediate material effect on the earnings per SAB share. However, it is expected that Edgars will have a beneficial impact on SAB's earnings per share in the future.

Documentation
 Documents for the implementation of the offer to Edcon minority shareholders are being prepared and will be despatched to Edcon shareholders as soon as possible. A circular to SAB shareholders containing details of the acquisition will be despatched at the same time.

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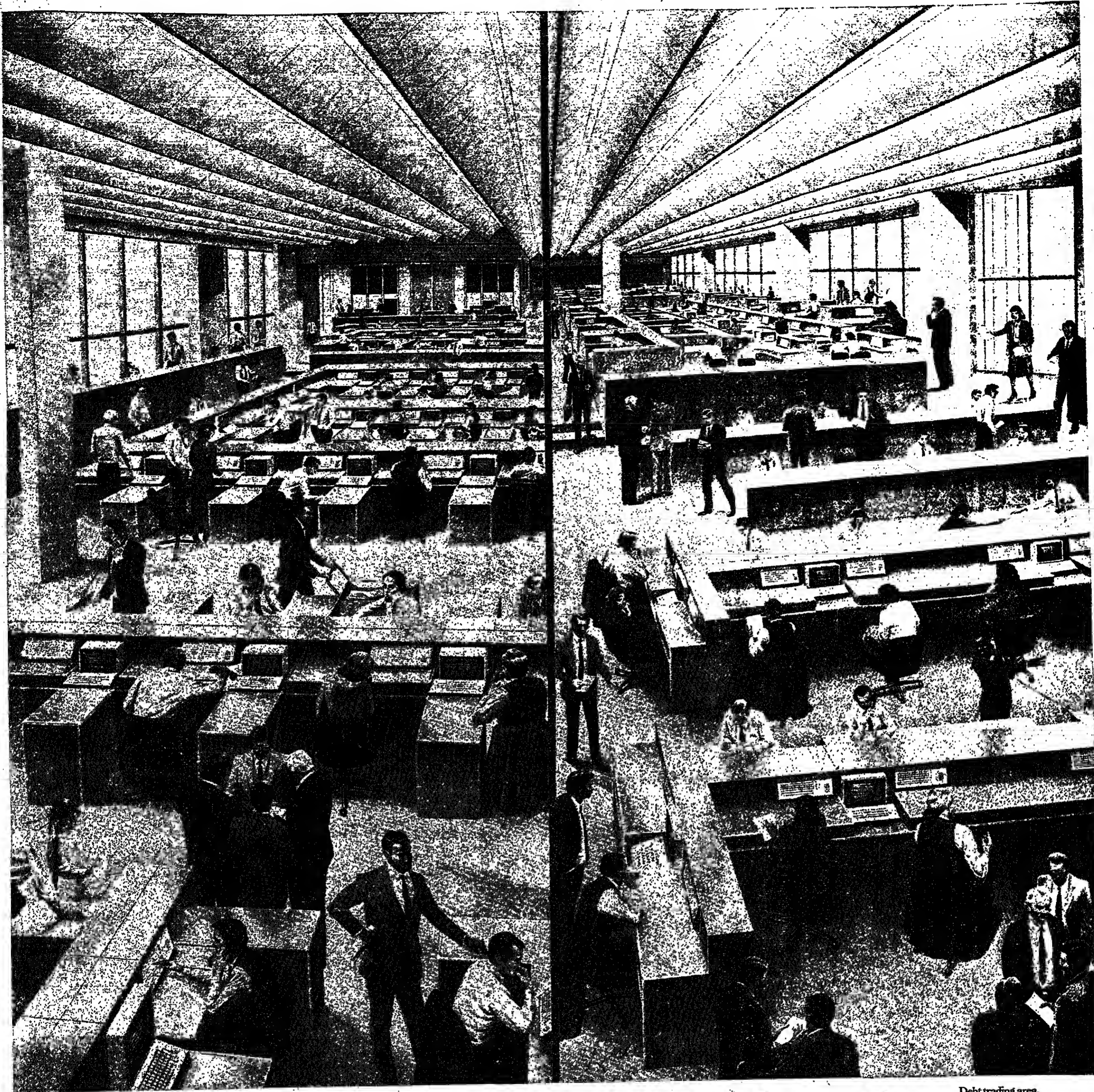
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UK NEWS - PARLIAMENT and POLITICS

Labour attacks guillotine on Oil and Gas Bill

BY JOHN HUNT, PARLIAMENTARY CORRESPONDENT

THE BILL to privatise the production of North Sea oil was condemned to the Commons last night by Mr John Silkin, Labour's shadow Leader of the House, as "evil, bad and wicked."

He compared it to the sale of Amersham International—the selling-off of publicly-owned assets at bargain-basement prices regardless of the public interest.

Mr Silkin was speaking in a debate on the Government's guillotine motion, introduced to speed the passage of the Oil and Gas (Enterprise) Bill, which is still in its Committee Stage.

Mr Francis Pym, Leader of the House, confirmed that the articles of association for Britoil, the privatised company which is to take over the British National Oil Corporation's exploration and production activities, will be published later this week.

Labour MPs have been angered by the Government's failure to produce the articles at an earlier stage. They want to make sure they contain proper safeguards to prevent foreign interests gaining control of Britoil.

But Mr Pym's promise yesterday failed to placate the Opposition. There were complaints that the documents will be produced so late that there will be no opportunity to discuss them in committee.

Mr Silkin said it was extraordinary that the Government was trying to speed up the BNO's "rip-off" at a time when oil prices were falling steeply.

Lawson dismisses Amersham criticism

By Ivor Owen

MR NIGEL LAWSON, the Energy Secretary, yesterday ridiculed assertions that the taxpayers lost in excess of £20m through the flotation of shares in Amersham International, the state-owned radioactive materials producer.

"This was a highly successful act of denationalisation," he insisted.

Mr Lawson argued that the idea that the price at which the shares changed hands after the original flotation provided an accurate indication of what could have been obtained for the company as a whole was not a view shared by "anyone who knows anything at all about the Stock Exchange."

Asked if he was satisfied with the advice given by Rothschilds, the merchant bankers, on the fixing of the original share price, he said: "I am satisfied that Messrs. Rothschilds gave the Government their best advice."

Mr Tam Dalyell (Lab West Lothian) challenged the minister to explain why the Investors' Chronicle, in its issue of February 26, had been able to assure its readers solemnly to expect a premium of 30p over the existing share price of 142p.

Why was it that neither Mr Lawson nor Rothschilds had been as wise? he asked.

Mr Lawson replied that at the time the share issue was announced the Investors' Chronicle had said the issue was "ambitiously priced."

He agreed with Mr Peter Viggers (Con, Gosport) that neither the use of the tender system nor a higher initial price for the shares would necessarily have ensured a higher net return for the Government.

"The taxpayer got a very fair price," maintained Mr Lawson.

Mr Merlyn Rees, Labour's shadow Energy Minister, asked: "Do you consider that your decision on the method of sale — and it was your decision — was the right one for the community?"

Mr Lawson answered: "I accepted the advice that I was given by my advisers. I take full responsibility for that."

Reaffirming his view that the sale had led to a "very successful result," he dismissed the protests over the privatisation with the comment that he had never before heard or read so much nonsense.

Hillhead hears first shots in anger

BY MARK MEREDITH, SCOTTISH CORRESPONDENT

THE Hillhead by-election campaign started officially yesterday with Mr Roy Jenkins, the Social Democratic-Liberal Alliance candidate, confident of friendly support.

The Alliance, Labour and the Scottish Nationalists held Press conferences to open their campaigns. The Conservatives waited for an adoption meeting later last night.

Voting among the 41,000 electorate is on March 25. The by-election was called on the death of Mr Tom Galbraith, Conservative.

Mr Jenkins was anxious to dispel persistent charges of "carpetbagging."

He said he had received a friendly welcome. Unfriendly responses could be counted on the fingers of two hands — less than at the same stage of his last campaign, in Warrington.

The number of "don't knows" in Hillhead was higher

than the 12 per cent estimate of a recent poll, he suggested.

This is borne out in a poll published today in the Glasgow Herald, which numbers don't knows at 30 per cent. The poll shows Labour with 23 per cent, the Conservatives with 22 per cent, the Alliance 17 per cent and the Scottish Nationalists 8 per cent.

Leaflets

Mr Jenkins said people he met were often wrestling over their party allegiances.

He headed off to hand out leaflets and shake hands with shoppers and parents outside local primary and nursery schools.

Mr Robin Cook, Labour MP for Edinburgh Central, speaking for Labour's Mr David Wiseman, accused Mr Jenkins of misrepresenting Labour's estimates of public borrowing.

Mr Cook attacked what he called the obscene situation in which 100 school leavers were chasing every job vacancy.

Labour wanted to create jobs through a stable exchange rate and a public spending stimulus to the economy, Mr Wiseman told a questioner that he was angry at the weekend speech by Mr Pat Wall, who is seeking endorsement as Labour's candidate in Bradford North.

Mr Wall did not agree with these views and he did not think the national executive of the Labour Party would back him.

Mr Jimmy Allison, Labour's election agent, said there was no prospect of a party split in Scotland.

Mr Wiseman accused the Government of pursuing "the economics of the madhouse and the social policies of the poorhouse."

"We need a radical alternative Budget designed to reverse the trend. Instead of taking

money out of public investment we should be putting it back into providing jobs at a humane level of social services," he said.

Mr George Leslie, the Scottish National Party candidate, said it was vital to put Hillhead and Scotland on the political map.

Reality

He said a recent poll had shown that 26 per cent of Labour voters were ready to back the SNP as their second choice and it was up to the party to bring this to reality.

Mr William Whitelaw, the Home Secretary, in a speech prepared for the adoption meeting of Conservative candidate Mr Gerald Malone, said it was hard to take the SNP seriously.

The movement "remains as bitterly divided on a question of its policies as it is completely united on a majority," he said.

Committee backs VAT exemption for arts

By Eleanor Goodman, Political Correspondent

THE ARTS LOBBY yesterday received the influential backing of the select committee on education and the arts for its argument that the arts should be exempted from VAT.

The committee said in a report that all theatres, concerts and other cultural events should be exempted by 1985. As an interim step, the arts should bear a special VAT rate five points below the standard rate in force.

VAT is levied now at the standard rate of 15 per cent, and is a valuable source of revenue to the Chancellor. But after taking evidence from numerous arts organisations, the committee concluded that it was "not in the national interest that the arts should be stripped of financial resources by the action of VAT levied at the rate of 15 per cent."

The arts lobby has long argued that the imposition of VAT was damaging to the arts, but it has not so far succeeded in convincing the Chancellor. The committee said that on the basis of the evidence received it appeared that VAT had the effect of raising ticket prices "beyond the threshold of price resistance" and of depriving sections of the public from regular access to the arts.

Britain, as a member of the EEC, is party to a directive aimed at harmonising VAT within the Community which decrees that all EEC countries will have to exempt the arts from VAT eventually, because they are "an activity in the public interest."

Third report from the education science and arts committee, session 1981-82; Public and Private Funding of the Arts; Interim Report on Value Added and the Arts.

● Authors whose books are in big demand at public libraries may soon earn up to an extra £5,000 a year. Arts Minister Mr Paul Channon announced in a written Commons reply yesterday, giving details of the Government's draft Public Lending Right scheme.

Power stations kept open for district heating

By Maurice Samuelson

SOME old power stations, due for closure, are being kept open for possible use of their waste heat for district heating schemes, Mr Fred Bosser, deputy chairman of the Central Electricity Generating Board, said yesterday.

Together with senior officials of the Electricity Council he was giving evidence to the Commons select committee on energy which is investigating the prospects for district heating schemes fed by hot water from power stations.

Proponents of such schemes see them as a long-term solution to the problem of high energy costs, pointing out that more than half a power station's fuel input is wastefully discharged into the environment.

In a memorandum, the CEGB told the committee that if there was a market for heat from CHP it was anxious to supply it.

However, the problem was whether there would be sufficient customers.

Energy aid hint for industry

BY IVOR OWEN

ANOTHER HINT that today's Budget will contain welcome news for industries which are major electricity-consumers was given by Mr Nigel Lawson, the Energy Secretary, in the Commons yesterday.

He told MPs: "I hope we will be able, very shortly indeed, to be able to do something—I do not say everything that industry would like — of significance in that area."

Dealing with domestic electricity charges, Mr Lawson said he expected that area boards would shortly announce price increases of under 10 per cent for the coming financial year.

In a general review of energy costs he confirmed that coal prices would stay the same until November.

He hoped it would be possible to look forward to some stability in gas prices, and suggested that the falling price of crude oil and weak demand meant that there was scope for buyers to seek lower oil products prices "through aggressive purchasing."

Mr Enoch Powell (OUP, Down South) asked if the Government looked ahead to the time when North Sea oil would be dear oil, and considered "how we should best protect ourselves against the danger of buying our own dear oil."

Mr Lawson replied: "If I may say so, I think these matters are best left to the market."

Mr Ian Lloyd (Con, Havant and Waterlo) said that the market had done a splendid job in destroying the cohesion of Opec, which was "such a disaster" for the industrial nations of the West in the past decade.

Mr Lawson said he hoped the House would approve of the positive way in which BNO had responded to market forces by reducing the price by 44 pence.

Mr Ted Rowlands, a Labour Energy spokesman, claimed that the fall in oil prices meant that BNO faced the greatest crisis since its creation.

He called on the Government to postpone the denationalisation

proposal for 12 months so that the corporation could weather the storm.

Ruling out such a step, Mr Lawson said he was confident that BNO would remain capable of dealing with developments in the oil markets as they occurred.

In further exchanges Mr Lawson said the present level of gas prices was below that which would result from a free market.

He stressed that demand for gas by industrial users was more than what was available. Domestic gas consumers, said Mr Lawson, were largely unaware that despite the considerable increases already announced, they would still pay a great deal less than their counterparts in France and Germany.

Gas was still cheaper by far than either electricity or oil.

Mr John Moore, a Under-Secretary for Energy, indicated an early announcement by the Government to speed take-up of grants for conversion of oil boilers to coal.

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Immigration 'obsession' with errors in papers

SEARCHES for discrepancies in documentation provided by immigrants from the Indian sub-continent wishing to join relatives in the UK has become become "almost an obsession," it was claimed at a Commons select committee yesterday.

"Documents, both statutory and private which prima facie speak for themselves are ignored and generalised as easily procurable and forged," the United Kingdom Immigrants Advisory Service (UKIAS) told the Race Relations and Immi-

gration sub-committee. "Discrepancies are deemed to outweigh the documentary evidence, thus tipping the balance of probability against the applicants, thus delaying decisions for months or years, causing great hardship."

UKIAS said in written evidence.

UKIAS investigated some 45 cases where entry clearance had been refused because the burden of proof of relationships had not been satisfied. In some UKIAS said it found the applicants were related as claimed.

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Ships retained

DEFENCE SECRETARY Mr John Nott confirmed in a Commons written reply that the assault ships HMS Fearless and Intrepid would be retained in Royal Navy service at an extra cost of £3m.

Anglo-Irish Council MPs may meet soon

BY MARGARET VAN HATTEN, POLITICAL STAFF

IT HAS BEEN widely recognised for some time, even by the Prime Minister, Mrs Margaret Thatcher, that the assembly envisaged by Mr Prior contains significantly less for the SDLP than was on offer under the 1973 Sunningdale power-sharing agreement.

This time it will have no guaranteed position in government. Indeed, if the election follows previous voting patterns, it could become a largely irrelevant without the support of the Alliance Party, which, while moderate, is still a Unionist party.

The Northern Ireland ministers, convinced that the Catholic minority is more interested in protecting its right to be Irish than in the weighting of assemblies and committees, have tried to offset the perceived deficiencies of the assembly by stressing the Irish context in which it would be set up.

The simple eight or nine clause Bill amending the 1972 Northern Ireland Constitution Act, expected to be introduced in parliament soon, is to be accompanied by a longish White Paper stressing the legitimacy of the nationalist identity in the province and the need for equal treatment of the two communities.

But there is so far no indication of how or whether this would affect the day-to-day administration of the province. For the SDLP, the manner in which the parliamentary tier is set up will show whether the British Government is acting in good faith, or merely trying to silence it with mood music.

The Government, while tolerably keen to see the parliamentary tier set up, is extremely reluctant to push for it or to define its functions.

This is only partly due to its fear of antagonising the

Unionists. Indications are that the majority of Westminster back benches are so bored by the whole idea that Government attempts to "fast-track" them could result in a humiliating rebuff.

Mr Prior could feel it known that he would smile on any back bench moves to rally support, possibly through an early day motion. But even that would be likely to raise the suspicions of the Unionists, who have seen several of their erstwhile colleagues deserted by what their supporters regard as an over-readiness to talk to Dublin.

The Official Unionists, the party to which Mr Prior is looking for some form of deal with the SDLP as a basis for devolution — is, in no mood to take risks.

Demobilised by the steady rise of Paisleyism in recent years, it may be heartened by last week's by-election triumph in South Belfast, where Mr Paisley's candidate was beaten into a humiliating third place.

But the OUP recognises that the result might well have gone

the other way — if, for example, the IRA had been more successful in its attempt to assassinate the Lord Chief Justice, Lord Lowry — and that Mr Paisley is still far from being eclipsed.

In trying to turn last week's win into the beginning of his decline, it will probably take a hard line in the devolution negotiations.

Certain behind-the-scenes efforts to prop up the OUP — the concentration on security efforts, the disregard of Mr Paisley and his attempts to rally a "third force," his exclusion from the early devolution negotiations — possibly even the investigations into the Kinross boys' home affair, which appears to be damaging Mr Paisley's party.

Many of the 300 spoiled votes in last week's by-election were reported to have had scrawled on them anti-DUP slogans referring to Kinross.

The Government would be reluctant to do anything which might give Mr Paisley a stick with which to beat the OUP. It is, therefore, unlikely to press them to accept any further developments on the Anglo-Irish Council, unless it, in turn, comes under heavy pressure.

Mr Paisley's party far from eclipsed

Mr Paisley's party far from eclipsed

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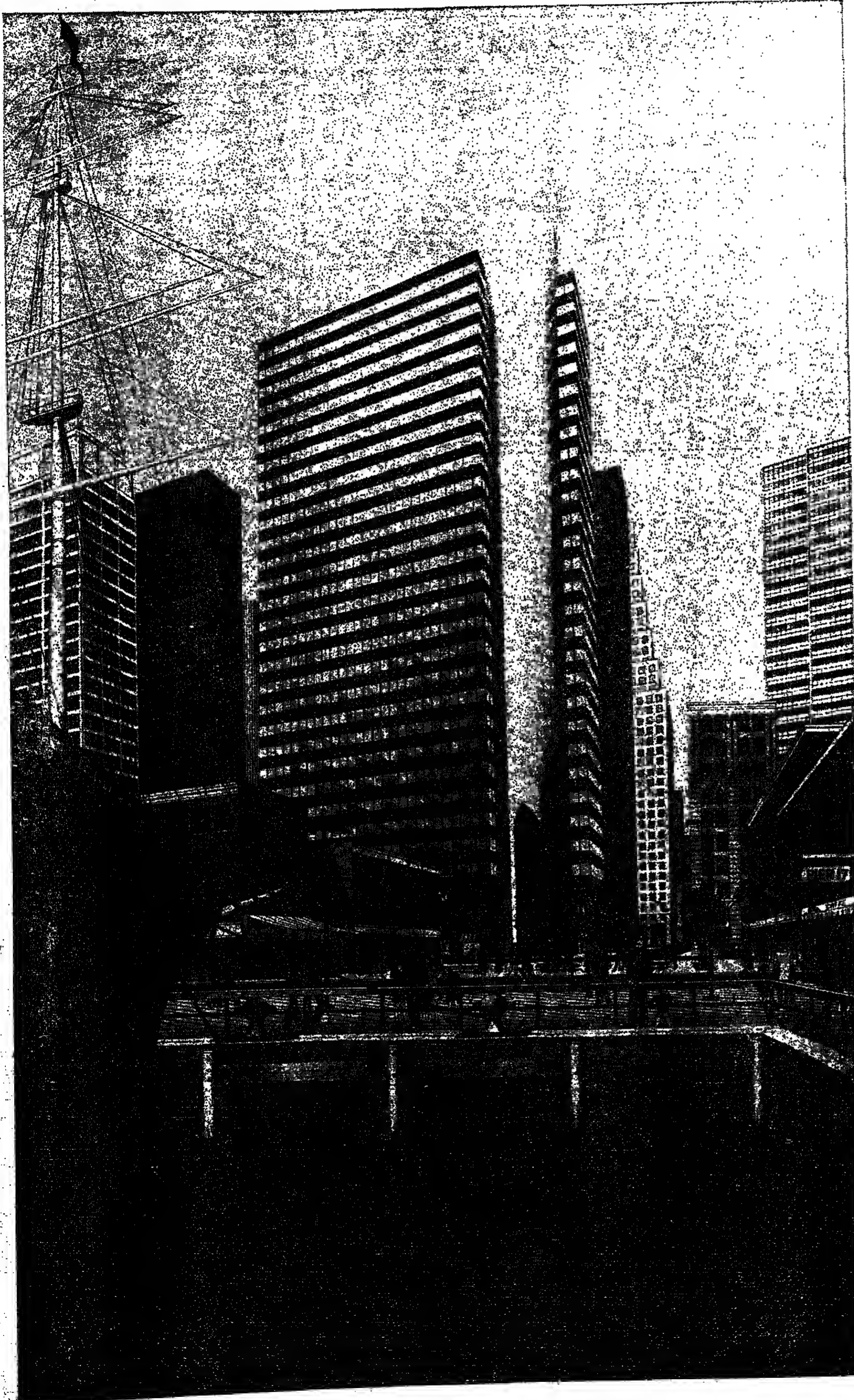
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£12m glossy paper process

BY ANDREW FISHER

WITH THE aid of a highly secret U.S. process and some £12m of capital investment, Tullis Russell of Scotland has produced a new kind of coated gloss paper to attack the high quality printing market.

Its product is called Trulux, the result of an advanced process called Trufo which Tullis Russell developed on the basis of the special coating technique of S. D. Warren, part of the Scott Paper group of the U.S.

The UK market for gloss papers — used in magazines, brochures, promotional material, and book illustrations — is worth about £120m a year, representing some 200,000 tonnes. Tullis Russell will be up against a variety of British and foreign competitors in this sector.

Tullis Russell, a private company, with annual sales of £40m, described Trufo as a breakthrough in coating technology.

With the international pulp and paper industry still in recession, now might seem an inappropriate time to come out with a new product. But Tullis feels it might derive some advantage from introducing something new when the market has no further to fall.

The company made a loss of nearly £80,000 in the first half to September 30, last year.

What the Trufo process does is eliminate supercalendering, the conventional gloss-producing method which compresses the paper sheet, losing bulk and rigidity.

A supercalender has alternate steel and fibre rolls and gives a gloss finish through the polishing action on the coated paper passing through the rolls under pressure.

The Trufo process smooths and moulds the coating differently without compressing

the base sheet. Tullis claims that its product has a superior smooth gloss, a high bulk to weight ratio, and exceptional rigidity.

Initially, the company intends to break into the British gloss paper market, later branching out overseas. As well as its investment on plant and equipment, it has also spent some £2m on research and development to adapt the Warren process to its own needs.

It does not intend to stop at Trulux. Mr Ronald Wylie, chief executive of the Fifebased company, said trials would take place in Warren's laboratories in Maine in April and September with the aim of developing further products with the Trufo process.

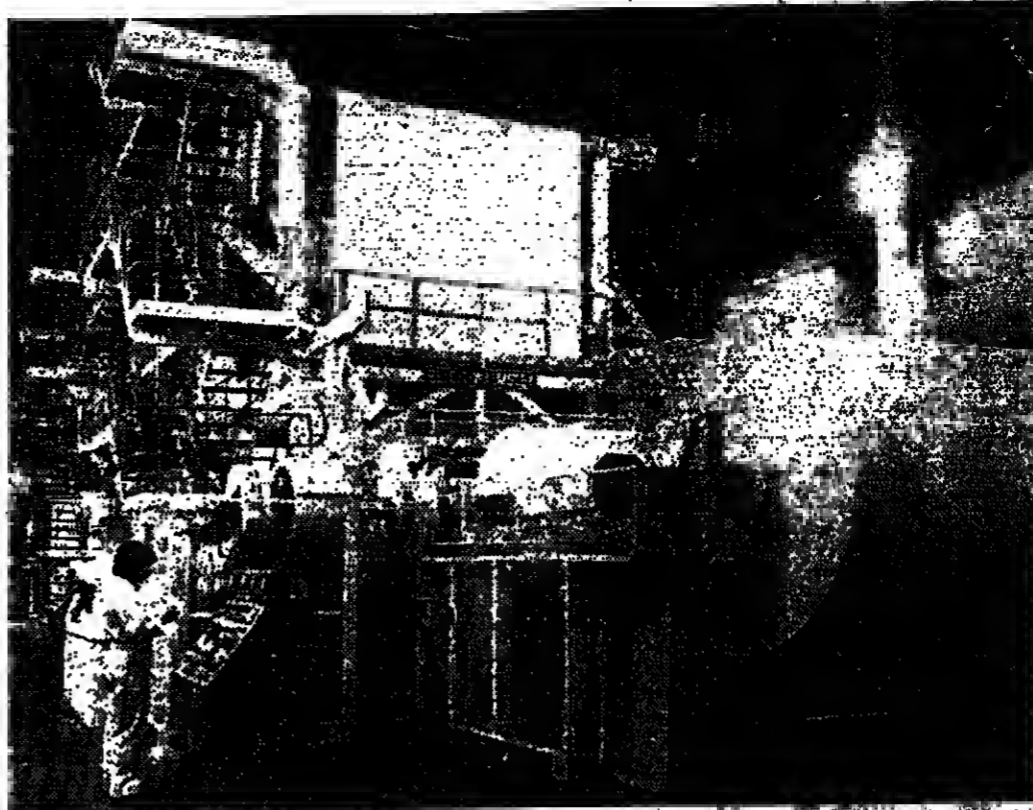
The investment in the Trufo plant is Tullis Russell's biggest project. Initial capacity will be between 20,000 and 30,000 tonnes a year—more than a tenth of the domestic market—

but this could be doubled by spending only another £250,000 or so, said Mr Wylie. Previously, the company made only uncoated papers.

The whole complex is as big as a football pitch, and the coater itself is 3.8 metres wide. The company says it is one of the biggest plants in Europe, producing fine quality coated grades.

Each roll of coated paper produced by the machine weighs 15 tonnes and can be as long as 20 miles. The coating area is fully automated with two separate computers and two micro-processors controlling every step of the preparation.

Because of the greater rigidity and bulking qualities of Trulux, said Tullis Russell, printers can often use lighter weights than normally specified, offering customers large savings in postal costs.



The feed end of the Russell Trufo coating plant

Rod for use of electricians

THE GERMAN company Kati-mex-Oelker GmbH KG, of Follerstrasse 82, Cologne 1, has developed "Kabelblitz", a special rod for use by electricians in the "threading" of cable through conduits.

The flexible rod is made of Polystal, a combination of glass fibres and polyester resin sold by the Bayer group, and can be used for the insertion of cables into long and winding conduits.

Comdial system ready for switch to the digital age

BY ELAINE WILLIAMS

COMDIAL is a young telecommunications company which says it has designed a new tele-

phone dial to smooth the transition from outdated electrochemical telephone exchanges to com-

plete digital systems.

The company, which was set up in the U.S. four years ago, is already in limited production of the dialler which can operate with the old electromechanical telephone exchanges and automatically switch over to modern digital ones, such as System X in Britain.

Until now it has not been feasible to produce a dial small enough or cheaply to work with both systems.

The company claims that its dial design can eliminate the need to produce two different types of electronics for the handset and could ease the problem of replacing old handsets when digital techniques take over completely.

In Europe alone there are about 189m telephone handsets, of which a substantial proportion will need to be replaced. In Britain, the figure is about 28m.

Every year the market for new and replacement telephones grows by about 10 per cent. "If we could just tap 10 per cent of the market, we would die laughing," said Mr Ray Vickers, chairman of Comdial's UK subsidiary.

The U.S. company was started

by Mr Don Hoff, an entrepreneur and inventor, who has already built up two other technology companies.

Investors have shown interest in Comdial, which is a public corporation. It is estimated to be worth at least \$42m on the U.S. market.

Comdial has spent more than \$6m (£3.25m) developing its dial which should be in full production in California by the middle of this year.

The new dial contains fewer individual components than a conventional touch tone or push button dial. The heart of the system is a single silicon chip— itself having the equivalent of 27,000 components.

The chip converts the numbers pressed on the keypad either into the sequence of electrical pulses used in electromechanical or the individual tones used for digital systems.

However, the ability of the system to do both tone and pulses opens up immense possibilities in the business world.

For example, the company says that it could be used to provide small shops and high street chains with a cheap way of verifying credit cards auto-

matically down the telephone lines.

This could cut dramatically the number of frauds on small value purchases below £50 which normally do not require checking and are, therefore, prone to abuse.

The dial is capable of storing telephone numbers in a small electronic memory. So it would be possible to press a single number and the handset would automatically dial the full code in the existing pulse mode for the UK system.

As soon as the call is made, pressing another button would convert to the tones system so that the user can communicate with a computer system operating a credit card system.

All the shop owner has to do then is dial in the full credit card number and wait for the computer to reply.

Comdial says that it already has the designs on paper to do this, but until recently has lacked the last link in the chain—the means for the computer to answer back.

The company solved this problem by taking over MCS, a subsidiary of Menzies, the newspaper distribution chain, which

makes and markets a voice-response system.

In return, Menzies has taken a 26 per cent stake in Comdial's UK subsidiary. The Rank Organisation already has 10 per cent.

Large organisations such as Renault and Ford use the MCS voice response system in the UK for applications such as parts ordering by telephone directly to the computer and checking car dealers' credit.

The general lack of touch tone telephones in the UK, however, and the relatively high cost of most systems on the market has prevented the wide applications of credit check systems here, unlike the U.S.

However, Comdial believes that it can provide a system which is cheap enough to be accepted.

Mr Vickers is keen to set up a UK manufacturing base, now that Comdial has taken over MCS to fill the missing gap in its technology.

UK manufacture of the new telephone system could begin in the next 18 months or so providing several hundred new jobs.

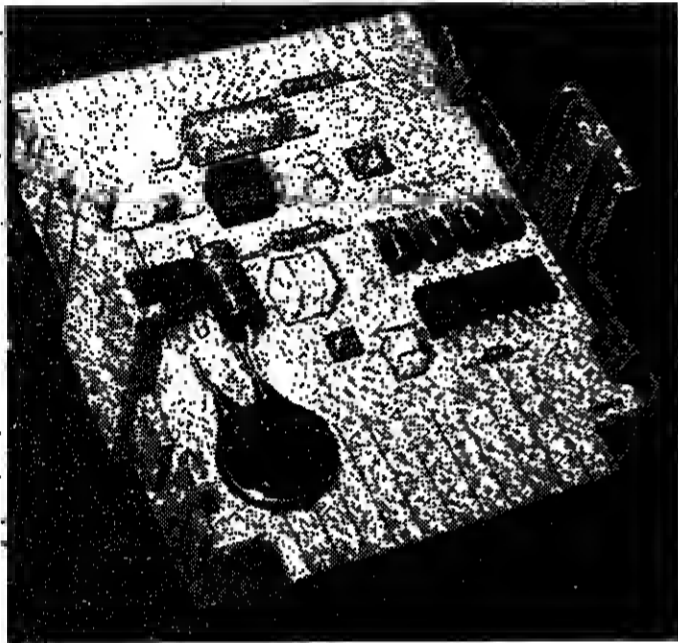
IBM research on wave characteristics of electrons

THE IBM research laboratories in Rüschlikon, Switzerland, have succeeded in demonstrating the wave characteristics of electrons. Their experiments are claimed to have proved for the first time that electrons can "tunnel" through a vacuum between two electrodes.

Former attempts to demonstrate this theory of

quantum mechanics, undertaken by IBM in the U.S. and by the U.S. National Bureau of Standards, did not succeed fully owing to problems of vibration; since the tunnel span has a distance of only a few Angstrom, the slightest vibration makes the experiment impossible.

JOHN WICKS



The Comdial innards contain far less components than conventional systems



Heinrich Rohrer and Bert Binig with their wave electronics experiment

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You will have no trouble finding Budget coverage: these days the problem is escaping it once you have heard the worst repeated six times...

BBC 2

6.40-7.55 am Open University. 11.00-11.25 Play School. 2.55 pm Play School...

LONDON

12.00 am Burton Moon. 12.10 pm Let's Pretend. 12.30 The Sullivans. 1.00 News, plus FT Index...

FT COMMERCIAL LAW REPORTS

Development land tax on compensation

COMMISSIONERS OF INLAND REVENUE v METROLANDS (PROPERTY FINANCE) LTD

House of Lords (Lord Wilberforce, Lord Simon of Glaisdale, Lord Russell of Killowen, Lord Scarman and Lord Bridge of Harwich): March 4 1982.

A STATUTORY purchase notice served on a local authority by a landowner is a claim to enforce a statutory right to dispose of the land in return for compensation...

Section 45 of the Development Land Tax Act 1976 provides: (1) ... the time at which, for the purposes of liability to development land tax, an interest in land is to be taken to be disposed of...

The House of Lords so held when dismissing an appeal by Metrolands (Property Finance) from Mr Justice Nourse's decision in the Chancery Division that it was subject to development tax after disposing of land to the local authority.

capable of beneficial use, that permission for some beneficial use ought to be granted, or that the purchase notice should be modified to require acquisition by another local authority or statutory undertakers.

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12.30 am Grandstand Time. 1.20 Anglia News. 6.00 About Anglia. 7.00 Peterborough Festival of Country Music...

Weather

6.00 Channel Report. 7.00 Private Benjamin. 10.28 Channel News and Weather. 10.32 A Change to Meet...

GRANPIAN

8.30 am First Thing. 1.20 pm North News. 6.00 North Tonight and Area Weather Forecast...

SCOTTISH

12.30 pm Gardening Time. 1.20 Scottish News. 1.30 The Electric Theatre Show...

TYNE TEES

9.25 am The Good Word. 9.30 North East News. 1.20 pm North East News and Local Round...

ULSTER

1.20 pm Luncheon. 2.58 Ulster News. 6.00 Good Evening Ulster. 7.00 Emmerdale Farm...

YORKSHIRE

12.30 pm Does The Team Think? 1.20 Calendar News. 6.00 Calendar (Emley Moor and Balmat additional)...

RADIO 1

9.00 am 'As Radio 2. 7.00 Steve Wright. 8.00 Simon Bates. 11.30 Dave Lee Travis. 2.00 pm Paul. Sumat. 6.00 Andy Peebles. 7.00 Talkabout. 8.00 David Jensen. 10.00-12.00 John Peel (e).

RADIO 3

6.55 am Weather. 7.00 News. 7.05 Morning Concert (e). 8.00 News. 8.05 Morning Concert (continued). 9.00 News. 9.05 This Week's Composer: Shostakovich (e). 10.00 Sacred Garden of Gethseme (e). 10.55 Malcolm Binns: piano recital (e). 11.25 Bach Violin Sonata (e). 12.05 pm BBC Welsh Symphony Orchestra, part 1 (e). 1.00 News. 1.05 Six Cornets. 1.25 BBC Welsh Symphony Orchestra, part 2 (e). 2.05 John Sheppard (e). 2.50 The Mandolins and Bohme String Quintet (e). 3.25 Tito Cannello (e). 4.25 News. 10.02 From Dur Dum Correspondent. 10.30 Billy Service. 10.45 Morning Story. 11.00 News. 11.05 Thirty Minute Theatre. 11.25 Witlira. 12.00 News. 12.05 pm You and Yours. 12.27 Quiz ... Unquote (s). 12.55 Weather, travel, programme news. 1.00 The World At One. 1.40 The Archers. 1.55 Shipping Forecast. 2.00 News. 2.02 Women's Hour. 3.00 News. 3.02 Eddon's England. 3.17 PM Budget Special. 0.50 Shipping Forecast. 6.55 News. programme news. 6.00 News: PM Budget Special. 7.00 News. 7.05 The Archers. 7.20 Medicine Now. 7.50 Animal Language (e). 8.20 High Mountain and Cold Seas (portrait of H. W. Tilman). 8.05 In Touch. 8.30 Kaleidoscope. 8.50 Weather. 10.00 The World Tonight. 10.30 Sam-Circus. 11.00 A Book at Bedtime. 11.15 The Financial World Tonight. 11.30 Today in Parliament. 12.00 News.

RADIO 4

6.00 am News Briefing. 6.30 Farming Today. 8.20 Shipping Forecast. 9.20 Today. 8.30 Yesterday in Parliament. 8.57 Weather, travel. 9.00 News. 9.05 Today Call (Spring Cleaning). 10.00 News. 10.02 From Dur Dum Correspondent. 10.30 Billy Service. 10.45 Morning Story. 11.00 News. 11.05 Thirty Minute Theatre. 11.25 Witlira. 12.00 News. 12.05 pm You and Yours. 12.27 Quiz ... Unquote (s). 12.55 Weather, travel, programme news. 1.00 The World At One. 1.40 The Archers. 1.55 Shipping Forecast. 2.00 News. 2.02 Women's Hour. 3.00 News. 3.02 Eddon's England. 3.17 PM Budget Special. 0.50 Shipping Forecast. 6.55 News. programme news. 6.00 News: PM Budget Special. 7.00 News. 7.05 The Archers. 7.20 Medicine Now. 7.50 Animal Language (e). 8.20 High Mountain and Cold Seas (portrait of H. W. Tilman). 8.05 In Touch. 8.30 Kaleidoscope. 8.50 Weather. 10.00 The World Tonight. 10.30 Sam-Circus. 11.00 A Book at Bedtime. 11.15 The Financial World Tonight. 11.30 Today in Parliament. 12.00 News.



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THE MANAGEMENT PAGE: Small Business

EDITED BY CHRISTOPHER LORENZ

While UK small businessmen hope the Chancellor will impart good news today, Terry Dodsworth assesses the climate in France

Where socialism meets capitalism head on

"IF YOU want to create new jobs, you first have to create new companies," Yvon Gattaz, head of the French employers' Federation (the Patronat), said the other day. The Government agrees with him. But it is about the only point on which the two sides, locked in a continuous battle of words for the last nine months, are on the same wavelength.

Watching this conflict is a little like being a spectator at a skittle game in which the Government keeps putting up a new target that is then unerringly knocked down by the Patronat.

The Industry Ministry may be increasing its aid—but the Treasury, say the employers, is taking away more at the other end: subsidised interest rates may be on offer—yet they are still extremely high; there may well be a new effort to create companies—but the enlarged nationalised sector could swallow up many of the traditional subcontractors: small businessmen may be exhorted to invest—but they are still steadily losing control to the unions.

This ideological argument derives from two radically different views about the mechanics of a modern economy. For the traditional wing of the Patronat, free market rules, with the opportunity to earn profits and run a strictly independent business, are what counts. In France, it is true, this freedom has always been laced with a certain amount of Government aid through subsidies. But small business has maintained a strong, bourgeois, anti-State ethic, impregnated with the idea that the "patron" is really boss and that private capital is sacrosanct.

Socialism runs counter to this thinking on two levels. First, it wants to increase workers' rights, raising the lowest wages (usually paid in the smaller companies), giving greater security and reducing the privileges of the patrons. Since the change of Government last summer, there have been cases of dismissed trade unionists being reinstated; and the employers feel themselves particularly victimised by the rise in social security charges, wealth taxes and taxes on business expenses.

Second, the Socialists believe that new technology has changed many of the old mar-

ket rules. This is an approach that looks beyond short-term, cyclical growth patterns and takes into account the development of international competitive pressures. French goods have become increasingly uncompetitive in the past ten years, it is argued. Hence the nationalisation programme, the big investment and research effort in the large companies; and hence, also, a programme of development for small companies.

These measures for the so-called PMIs—the Petites et Moyennes Industries—are also based on a clear set of theoretical principles. In France, the PMIs are a precisely defined set of companies employing between 10 and 499 workers. There are reckoned to be about 45,000 of these in industry (as opposed to commerce), accounting for 37 per cent of industrial production and 25 per cent of exports.

Ministers claim that government views are getting across but scepticism reigns uncompromisingly in the Patronat

The Government makes a clear distinction between two different types of company in this category. On the one hand are the sub-contractors, essentially suppliers of parts that bigger groups do not want to make. These enterprises, clustered in dependent state around the larger organisations, are enormously sensitive to their fortunes. On the other hand are the new technology companies, businesses that have generally been started since the war on the basis of one good idea, and which have a discrete market, quite often on a world scale.

The main thrust of the new measures for the PMIs is therefore designed to try to modernise the sub-contracting type of company, while giving a new stimulus to the creation of innovative enterprises. Among the various propositions are:

- A clear distinction of the role of the nationalised sector in supporting smaller companies. This is an aspect of the nationalisation project which has not received much attention as yet, but which is conceived as an important aspect of the programme's "locomotive" effect on the rest of industry.

- The Government would like nationalised companies to draw up "contracts of stability" with their smaller satellites to give them greater security. Measures would include commitments on payment periods to be paid to between 60 and 90 days against 120 days often practised by the big companies with sufficient muscle; agreements not to edge out suppliers by setting up activities in-house that had previously been done outside; and attempts to split the economic impact of serious reductions in business between the larger and smaller companies.

- Big companies will also be encouraged to help their satellites with exports and research, making their own facilities available where necessary.

- There is to be increased aid for research workers attached to small companies, while credits for ANVAR, the state industrial innovation body, are to be doubled to FF 720m. These extra funds are designed to bridge the financial gap between the design of a product and putting it into production.

- To help potential young entrepreneurs, the Government also wants to make it easier for middle managers to leave a company and then return if they fail. Under this scheme, jobs would be kept open for three years, with the Government footing the bill.

- An improved system of advisory committees for young entrepreneurs is to be encouraged. The aim is to make advice available from experienced managers and bankers rather than bureaucrats.

- An experiment is to be launched to set up a high technology workshop that will make research and development material available to industrialists at a reduced price.

- A further effort will be made to reduce the time needed to set up a company in France, one of the most red-tape ridden countries in the western industrialised world. According to Industry Ministry figures, it takes seven months to set up a



Yvon Gattaz, president of the Patronat, the French employers' federation: "An enterprise is like a bicycle, it keeps in balance by moving forward"

FRANCE'S PETITES ET MOYENNES INDUSTRIES (PMI)

- have between 10 and 499 workers, and a turnover of less than FF 100m (\$16.7m).
- comprise 45,000 companies (19 per cent of France's total), and employ 2.6m workers (45 per cent of industrial employment)
- account for one in two exports: about 25 per cent of France's total exports, but only 1,000 realise more than 60 per cent of sales overseas
- are particularly strong in the consumer goods sector, building, and capital goods
- account for 37 per cent of industrial production, and 25 per cent of industrial investments
- between 1974 and 1977 they created jobs (+1.9 per cent), while large companies reduced them (-4.8 per cent)
- between 1970 and 1976, the 200 companies with the strongest economic growth in France (a real rate of at least 15 per cent a year), were all PMIs

Source: Industry Ministry



Pierre Dreyfus (left) and Jacques Delors, Ministers of Industry and Economy respectively, convinced that France's jobs problem can only be defeated if new small companies are created

company in France, against 24 hours in the U.S.

- Financing is to be reformed, partly through the development of the nationalised banks, which are to be forced to get closer to industry, and partly through moves to set up new risk capital instruments.

- The PMIs are also intended to benefit from the range of subsidised credits made available to French companies by the Government up to a ceiling of FF 24bn this year. Funds vary from close to market rates of around 18 per cent at the moment, to a "super-subsidised" 13.5 per cent for FF 11bn of credits which have to be spent in specific areas such as energy saving, robotisation, exports, and job creation.

- In addition, the system of subordinated loans ("prets participatifs"), a kind of quasi-equity on which interest payments are adjusted to profits, is being expanded from FF 2bn to FF 3bn. This is aimed at encouraging French small businessmen, traditionally suspicious of opening their capital to strangers, to move towards equity-type funding as a means of reducing the high level of debt financing.

- It is not difficult to find critics of many of these ideas. Although officials claim that the Government's views are getting across when ministers meet small-businessmen face to face, scepticism reigns uncompromisingly in the Patronat. Philippe Combin, director of financial affairs, openly doubts that many of the projects will get off the ground, while he argues that the different financial measures

of the new Government have had an overall negative impact.

"With the Socialists you get a system which takes more from enterprises merely to redistribute it back again," he says. "And you often find that the new charges are higher than the new redistributions."

He goes on to make a fairly convincing case for the fact that small companies are now in a rather worse financial position than in the past. Increases in social security payments, local rates, the extra cost of the fifth week of annual holidays and the shorter working week have all chiselled away at margins.

The signs are that the Government has taken the point on these issues and will now try to hold charges on industry at around the present rate of 43 per cent of GNP,

reckoned to be the highest in the West.

But where it will not want to compromise is over the question of pushing and cajoling and pressurising industry to modernise.

On this point there is some common ground between the Government and the employers. Gattaz himself is a product of the new wave of innovative entrepreneurs that have emerged since the war. He set up his own company about 30 years ago, has established an international business in specialised micro-electronics, and believes passionately in companies of a "human (i.e. smallish) scale".

Leading Ministers, like Jean-Pierre Chevènement, at Research, Michel Rocard at Planning, or Pierre Dreyfus

and Jacques Delors at Industry and Economy, all share a similar enthusiasm for technology. They are also convinced, like Gattaz, that the jobs problem can only be defeated if new small companies are created.

But while general objectives for the small business sector may be shared, there still remains a big gulf on the means of achieving those ends. Gattaz continues to put the emphasis on markets and profits: "An enterprise is like a bicycle, it keeps in balance by moving forward," he said recently.

The Government has to remove fears that it is putting a brake on that movement if it is to win employers' confidence in the general refurbishment of French industry that it is advocating.

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WITH THE Chancellor due on his feet later today this may not seem the ideal time to draw attention to a book which boasts "details of the 1981 Finance Act." However, Tax Saving for the Family Business, written by Coopers and Lybrand tax specialists and available at £1.95, answers the questions most often asked by smaller businesses. Incorporation, stock relief, employee benefits, pensions and capital transfer tax planning are some of the subjects covered in the question-and-answer style. There are plans for it to be updated each year.

TWO COURSES for those thinking of setting up their own business are taking place this Saturday—and it's not

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JUDGING by recent calls to the headquarters of the 50,000-strong National Federation of Self Employed and Small Business, many small firm proprietors seem to think that Section 29 of the 1981 Companies Act amounts to a "burglar's charter."

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FINANCIAL TIMES SURVEY

Tuesday, March 9 1982

New Airliners

Bright future in longer term

BY MICHAEL DONNE

ALTHOUGH THE current economic recession has depressed world air travel and substantially eroded airlines' finances, thus reducing in turn the inflow of new orders for airliners, the longer-term future remains bright.

Last year, the world's major civil airliner manufacturers (Airbus Industrie, Boeing, British Aerospace, Fokker of Holland, Lockheed and McDonnell Douglas) collectively logged orders and options for 350 new jet airliners, worth about \$12bn (£6.45bn). This was well down on the 522 new jets, worth about \$13bn, ordered in 1980, which in turn was well below the 751 new aircraft, worth about \$20bn, logged in 1979.

This progressive decline in orders over the past two years reflects the decline in airline earnings, especially in the U.S. and Western Europe, as a result of the recession. And continually rising costs, with fuel alone having soared in recent years. Some hopes of stabilisation only now emerging.

Significant

Air travel on the scheduled airlines last year, as measured by the International Civil Aviation Organisation, declined for the second year in succession, by about 2.5 per cent, to 728m passengers (it was at its post-war peak of 754m passengers in 1979), and few observers believe there will be any early significant improvement.

At best, there may be some signs of an upturn in world air travel — again reflecting im-

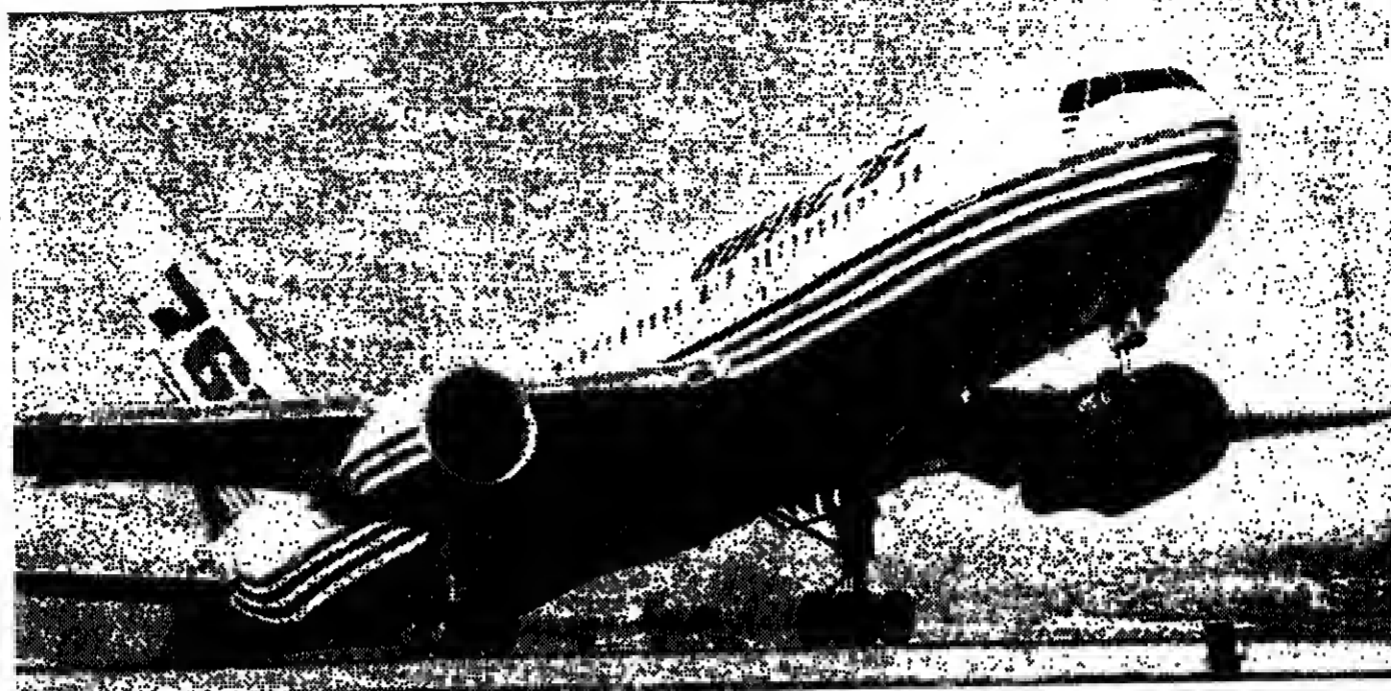
proving world economic conditions—by the end of this year, perhaps strengthening in 1983. But most airlines do not expect to see a significant return to profits until 1984, and not until then is there expected to be any substantial rise in the volume of new equipment orders, although inevitably some orders are bound to be placed in the meantime if only to replace ageing fleets.

The airlines' difficulties and their effects on the manufacturers have been highlighted in recent weeks by the decision of American Airlines to cancel an order for 15 of the new Boeing 757s and the option for a similar number, because of "inadequate profits" and the discouraging outlook in the U.S. airline industry.

Why, then, are the world's major aircraft builders so confident of a brighter long-term outlook that they are currently spending several billion dollars (and contemplating spending several billion more) to develop a wide range of new airliners?

There are several reasons for their confidence. Most of them believe that the current recession will not last for ever, and that by the mid-1980s it will either have faded or be on the way out, and that air travel will again be moving upwards strongly. This, in turn, will generate a demand for new equipment to cope with the growth in traffic variously estimated at between 5 and 7 per cent a year.

Most aviation organisations, including the International Air Transport Association (representing over 100 of the world's major scheduled airlines), as



At a time of recession among the world's airlines, the major aircraft manufacturers are spending several billion dollars in preparing for an anticipated demand for about 6,000 new jet and turbo-prop aircraft up to 1992, worth more than \$160bn

well as the aircraft manufacturers believe that in the long term, air passenger travel worldwide will expand through the 1980s and beyond. Their forecasts vary between 5 per cent growth annually up to 1990 (the IATA) and as high as 8.2 per cent a year (Boeing), with the average being about 5 to 6 per cent.

Even at that level, the 1981 total of 728m passengers on worldwide scheduled services will have nearly doubled to more than 1,200m by the early 1990s, creating a substantial demand for new aircraft. This

figure excludes the growth in non-scheduled services, including charters, which are not measured in the same way as scheduled operations, but are known to be substantial, and are likely to expand as fast as the scheduled services.

Second, by the mid-1980s, a very large proportion of the world's total jet airliner fleet will be ageing rapidly and require replacement. Boeing, the world's biggest jet airliner manufacturer, estimates that out of the world's total jet fleet in service at the end of 1981 of about 6,000 aircraft, about

500 were between 17 and 22 years old, at least another 1,600 were between 13 and 16 years old, and another 1,200 were between nine and 12 years old.

At the same time, many of those aircraft increasingly will be uneconomic to fly.

Although crude oil prices are now falling, it will take some time before these can be reflected in airlines' costs, and even so high fuel bills will remain a major problem for the future. Fuel, which accounted for only 15 per cent of the major airlines' operating costs

in 1970 (and even less than that when many of the current jet airliners now in service were first introduced in the early to mid-1960s) now accounts for 27 per cent of those costs on average, and is expected to account for about 35 per cent by 1990.

Yet another factor is the increasingly stringent noise regulations imposed by governments on airlines at many major airports. New and even tougher noise regulations are due to become effective in many countries, especially the U.S. and Western Europe, in the mid-1980s, which will make the

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This survey is written mainly by Michael Donne, Aerospace Correspondent

● The new Boeing 767 undergoing steep take-off trials as part of the flight-test programme. The aircraft is now well into the programme, which is aimed of the award of an airworthiness certificate in late summer. Deliveries to airlines, including United Airlines, American Airlines and Delta, are due to begin by early autumn.

Boeing suggests that of this, \$198bn, about \$79bn (£42.7bn) will be for aircraft to meet traffic growth, the other \$47bn (£25.3bn) being for aircraft to cover the replacement of existing ageing fleets.

If in addition account is taken of the \$25.4bn (£13.7bn) of orders for over 1,000 new jets held by the manufacturers at the end of 1981, for delivery over the next few years (including 567 jets by Boeing alone), the estimated cumulative total of jet airliner sales through to 1982 is \$151.4bn (in constant 1982 dollars), or more than \$81bn.

older generation of jet airliners even less attractive to operate. The cumulative effect of all these factors—increasing age, rising operating costs, and more stringent noise regulations, coupled with an improvement in overall economic conditions—is likely to be an improving demand for jet airliners from about the mid-1980s onwards.

Boeing, whose position as the world's biggest jet builder makes its forecasts particularly significant to the airline industry, estimates that between now and 1992, the volume of available seat-miles provided by the world's airlines will rise from 1,200bn to 1,900bn. This, in Boeing's view, will generate a market worth about \$126bn (about £68bn) for new jet airliners of all kinds throughout the Western world (its forecasts do not include the Soviet Union, which meets its own requirements, but do include some element of procurement from the West by China).

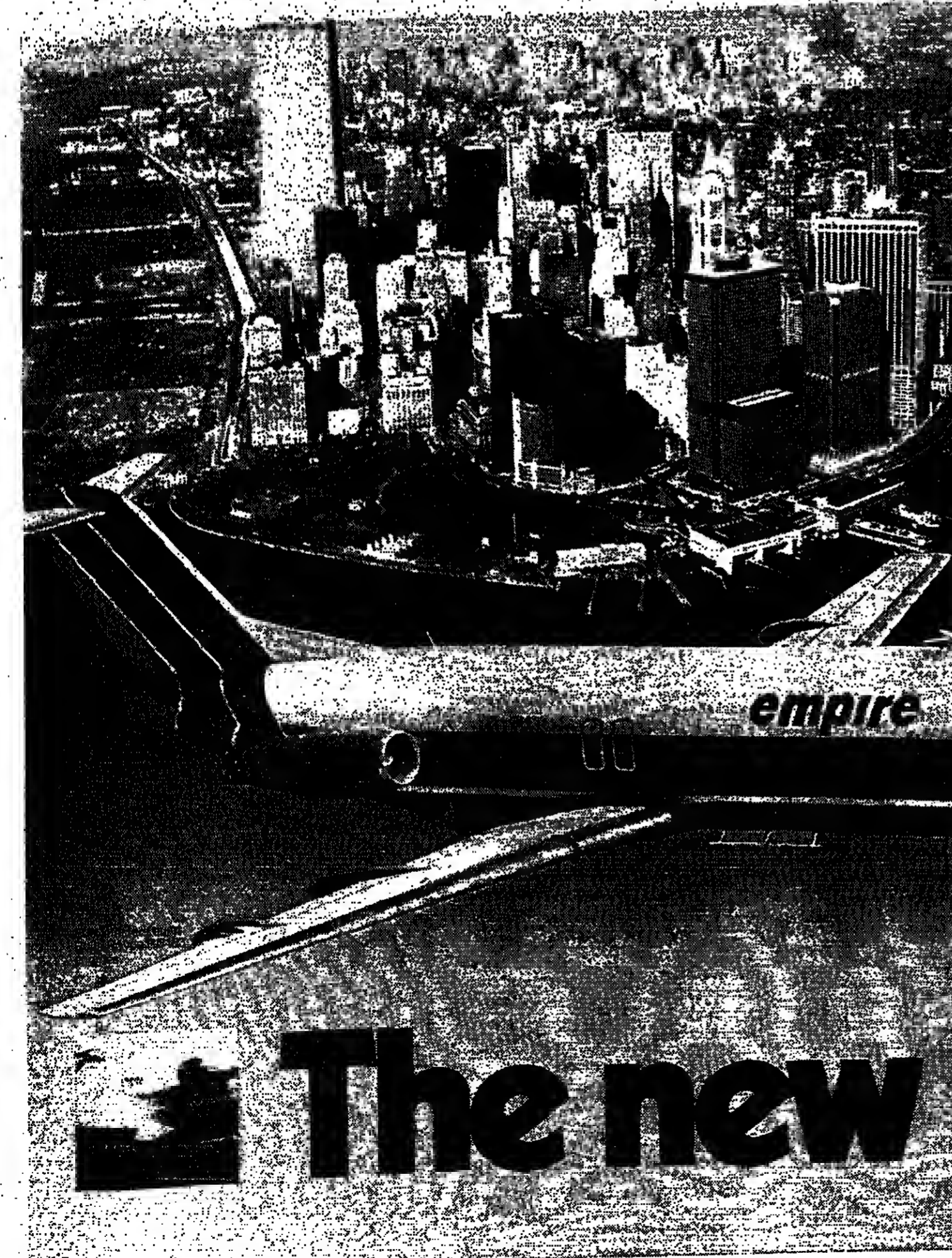
This will be spent on about 5,000 "first-line" jet airliners, in all, including about 4,000 aircraft yet to be ordered and 1,000 orders still outstanding, mostly for the scheduled services of the major international and domestic airlines.

In addition, however, there is likely to be another big market among the smaller "regional" and "commuter" airlines, whose development in recent years has been rapid. This area of world air transport development has been less affected by the recession, and is expected to grow strongly in the mid-to-late 1980s, generating its own demand.

This will be for smaller types of airliners (that is, scaling 100 passengers a time and below) not accounted for in the Boeing forecasts.

Estimates of this market are difficult to get, but the score of so manufacturers involved

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The new Fokker F28. The fuel-efficient jet for growing short-haul operations.

The only modern fanjet of its size specifically designed to expand your system profitably in the 80's.

Short-haul operators all over the world face the continuing challenge of expanding in the face of rapidly increasing fuel costs. And a growing number have solved the problem with the new Fokker F28.

No other aircraft in its class even comes close to matching the F28 in terms of fuel efficiency and operating costs. Over a stage length of 250 nautical miles, the F28's two Rolls-Royce RB183 engines burn 35% less fuel than the nearest competitor in operation. Combined with lower costs in maintenance, crew, landing and navigation charges, the total operating costs of the F28 are nearly 40% less.

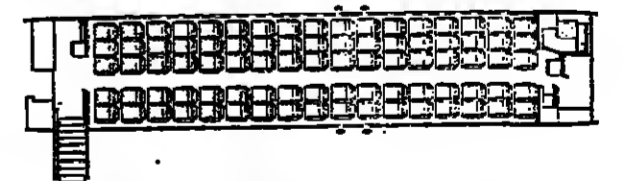
The step up from turboprops.

The 85-seat F28 is the only jet that can profitably replace turboprop aircraft on low-density, short-haul routes. It's the logical choice for expanding short-haul operations. Many airlines fly the F28

on stages averaging 30 minutes, or even less. And its low-noise foot print, which enables the F28 to operate from city-center airports, has been further improved with the introduction of the 10-lobe internal mixer.

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The way to grow. Fokker F28

NEW AIRLINERS II

Bright future in longer term

CONTINUED FROM PREVIOUS PAGE

including de Havilland Canada, Fraxator of Brazil, Saab of Sweden, Fairchild of the U.S., Aerospiale of France, Aeritalia of Italy, and British Aerospace and Short Brothers of the UK generally believe that it would amount to as many as 1,000 aircraft through the next decade (mostly turbo-propeller types rather than jets) worth about \$500 to \$100m including spares, and possibly considerably more.

Rapid

These aircraft not only will be required to meet the growing demand for "feeder-floer" services in the major industrial areas of the world, but also to link communities in the Third World, where air transport is

under development or under consideration is very wide. Every major jet airliner manufacturer is busy preparing for the future.

Airbus Industrie has rolled out its new 200-seat version of the A-300 Airbus, the twin-engine A-310, and is working on the design of a smaller 150-seater, the A-320.

Boeing has already flown its new two-engine short-to-medium range rival to the A-300, the 767, as well as its rival to the A-310, the 737. Boeing is also developing a new version of its highly successful small twin-engine 737, the Series 300, and has plans for a number of derivatives of these, as well as for its big, long-range 747 Jumbo. Boeing is also contemplating a new 150-seater, under the overall designation "Dash 7".

British Aerospace is involved across a wide spectrum of designs, from its 20 per cent stake in Airbus Industrie's A-300 and A-310 Airbuses, and a possible stake in the new A-320, through its BAe 146 four-engine regional airliner, to its smaller Jetstream 31 and BAe 748 commuter airliners.

Lockheed has announced that it is pulling out of the TriStar tri-jet market by 1984, so that while the TriStar itself will be flying for many years to come, the company's involvement in commercial airliner manufacture will now diminish rapidly.

McDonnell Douglas is heavily engaged both on its short-to-medium range DC-9 Series 80 twin-engine jet airliner, and the bigger tri-jet DC-10, for which a number of derivatives are planned.

Fokker of Holland has been highly successful with its F-27 turbo-prop transport and its F-28 Fellowship jet airliner (both of which are still in production).

Although McDonnell Douglas and Fokker have dissolved their partnership on a projected 150-seater airliner, each is to continue its studies independently.

The sales battles among these manufacturers for shares in the big markets that lie ahead are likely to be fierce. This will be especially the case between Airbus Industrie, the European consortium building the A-300 and A-310 Airbuses, and Boeing, whose 767 and 737 are direct competitors with those aircraft.

Much of the future remains cloudy because of the current recession, but there appears to be little doubt among the world's aircraft manufacturers that air travel, although depressed, cannot be kept down for ever. It is this longer-term confidence that is encouraging them to invest so heavily in new programmes.

Greater caution over financing

"YOU CAN SAY that with hindsight we shouldn't have touched it." The banker who uttered these words is a member of the 13-bank syndicate led by Midland Bank which provided Laker Airways with \$101m of 10-year finance to help purchase three A-300 Airbuses.

The Laker Airbus loan proved to be a banker's nightmare when the airline collapsed early last month. But the Laker disaster has not deterred international bankers from forging ahead with new jumbo packages for the world's state-owned and independent airlines.

Bank of America and National Westminster Bank are even now at work on a \$165m 10-year loan for British Caledonian, the major surviving UK independent long-haul carrier. The object of the exercise is the purchase of three A-310 Airbuses and the loan package probably will contain some similarities to Laker's deal.

The UK Government is expected to provide interest rate support and the manufacturer - Toulouse-based Airbus Industrie - is said to be offering first-loss guarantees, a proportion of the potential losses to shelter banks from some of the risks of aircraft financing.

Aircraft financing can be a risky business, but more often than not it is so heavily underwritten by governments and others that it becomes an exercise in collective financial responsibility.

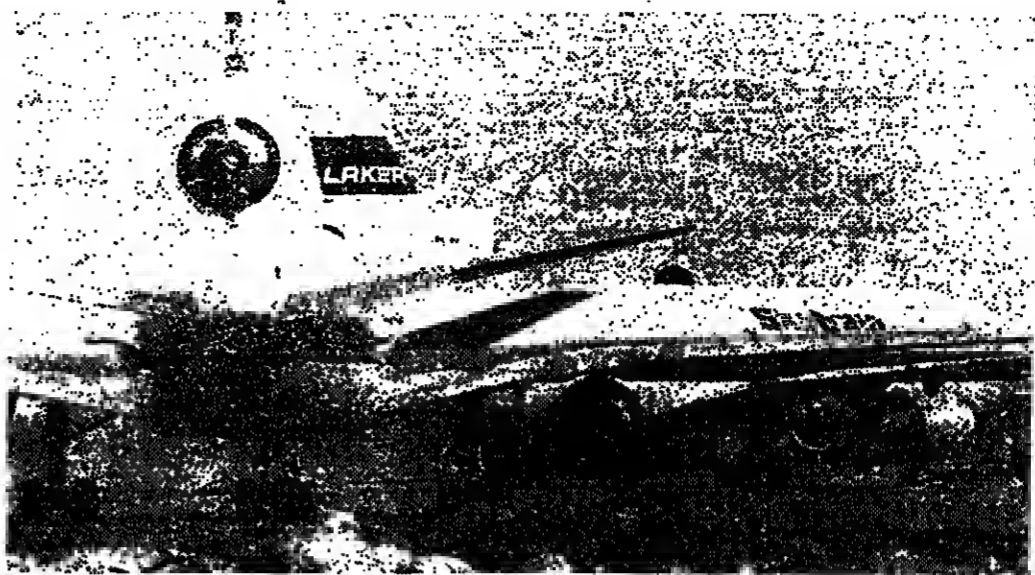
The cash required to fund the purchase of new aircraft over the next ten years - an estimated \$160bn - will have to be generated from the airlines' internal resources, from government guarantees and grants and from borrowings on the international capital markets.

While aircraft financing remains attractive business for many bankers, the current problems faced by the airline industry are inducing a new sense of caution.

To fund the growth of the world's airlines over the next decade will be a tall order, but a number of bankers are optimistic nonetheless that the order will be filled.

Mr Bob Wyatt, Midland Bank's assistant general manager for aerospace finance (and the man who helped engineer the Laker Airbus deal), reckons that between 55 and 60 per cent of new aircraft equipment will be bought by non-North American airlines over the next decade.

He sees close in two-thirds of the financing being done



Grounded Laker DC-10s: it will be a long time before the dream that crashed is forgotten

special leases such as the German dentist lease, where by a group of small investors combine to purchase and lease an aircraft as a tax write-off.

One of the less orthodox devices used by banks recently has been the "double-dip" lease. The way double-dip financing works is that a UK bank purchases an aircraft and then leases it to a U.S. airline. The airline pays for the lease, but under certain tax codes it also takes full capital allowances as "owner" of the aircraft. Meanwhile, in the UK, the owner-bank also takes full capital allowance.

It is not known how many aircraft deals have been done in the past year under this method, but the total volume is probably below \$1bn. Double-dipping has not been restricted to the airline business, but it has assumed a particularly innovative form among aircraft bankers.

Innovation in banking can be a profitable tool: in the international capital markets, new devices are being conceived constantly to attract investors and ensure successful borrowings.

But some of the best banking brains in Europe found that no degree of innovation would help them to put back together the humplumpy ruins of Laker Airways when it came crashing off the wall.

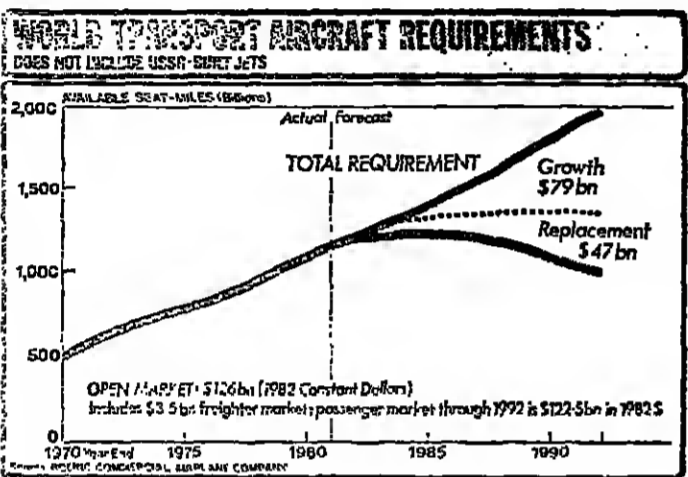
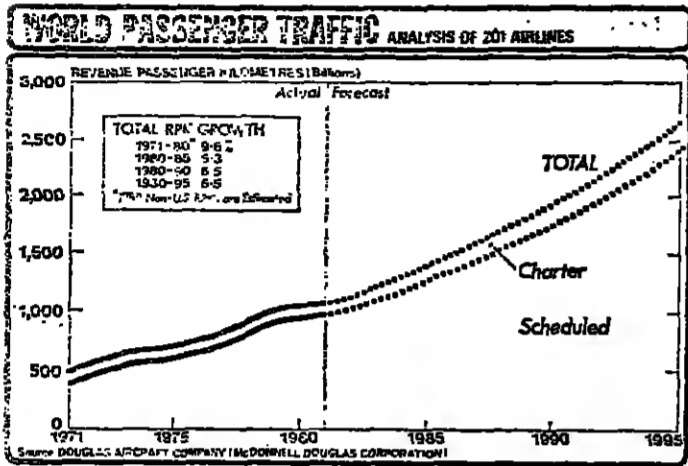
At its demise Laker had \$421m of long-term dollar debt plus a £9m overdraft from the Midland Bank's wholly-owned subsidiary, the Clydesdale Bank. Its bank creditors included a consortium led by Export-Import Bank of Washington, the Midland-led syndicate and a Mitsui-led Japanese syndicate.

Its ratio of borrowings to equity base stood at seven to one six months before the crash. At the end its liabilities outstripped assets by more than £20m.

Laker Airways was built on a dream, but the dream was destroyed with such anguish that it will be a long time before it is forgotten. Nonetheless, the sight of British Caledonian picking up the Laker pieces and expanding its own business in the wake of the collapse has encouraged aircraft finance bankers.

It will be interesting to see how many bankers and airlines have digested the cautionary tale of Laker Airways as they carry out their expansion plans over the next decade.

Alan Friedman



through export credits and much of the remainder through Eurodollar loan top-ups.

The export credits are a function of the heavy involvement of governments in airlines around the world. Airlines are a major symbol of national prestige, a vital element of any developing country's national persona, like a steel industry or a seat at the United Nations.

Nor is it just in developing countries that airlines are heavily subsidised. A number of Europe's state airlines provide examples of how large amounts of government money can be put for prestige purposes into organisations which are making losses.

These include Britain's state airline, BA, and the national airlines of Belgium and Italy.

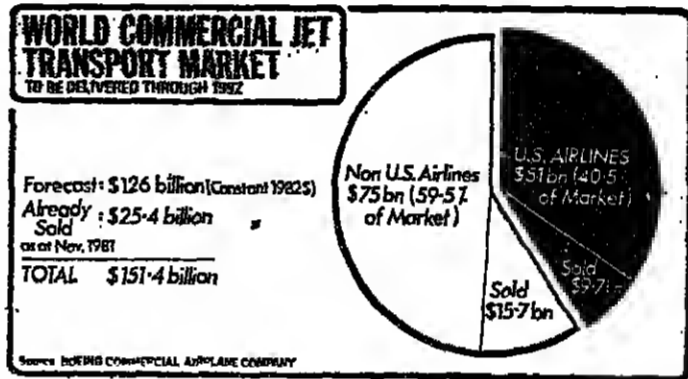
And yet, says Wyatt, the money will probably be there. "My experience of aircraft finance over the last three years

is that airlines can get a more competitive deal than sovereign borrowers themselves," he comments.

Not only do aircraft deals create prestige for governments and bankers, but there are also a number of traditional relationships between banks and aircraft manufacturers. Boeing, Lockheed, McDonnell Douglas and Airbus Industrie all have their particular links with banks, assisting in the selling of equipment and its financing.

Airbus Industrie, the European consortium in which British Aerospace has a 20 per cent stake, has designated certain banks as country agents. In the UK it is Midland Bank, which formed its aircraft finance department only three years ago. In West Germany it is Dresdner Bank and in France it is Credit Lyonnais.

How might a typical aircraft financing deal be broken down?



The all new A320. Well worth waiting for.

Between now and the year 2000, some three and a half thousand new aircraft will be needed to replace ageing and outmoded single aisle aircraft in the 120-180 seat category. Which is why many airlines are now looking at intermediate derivatives which offer apparently attractive benefits in terms of fuel burn and seat-mile costs.

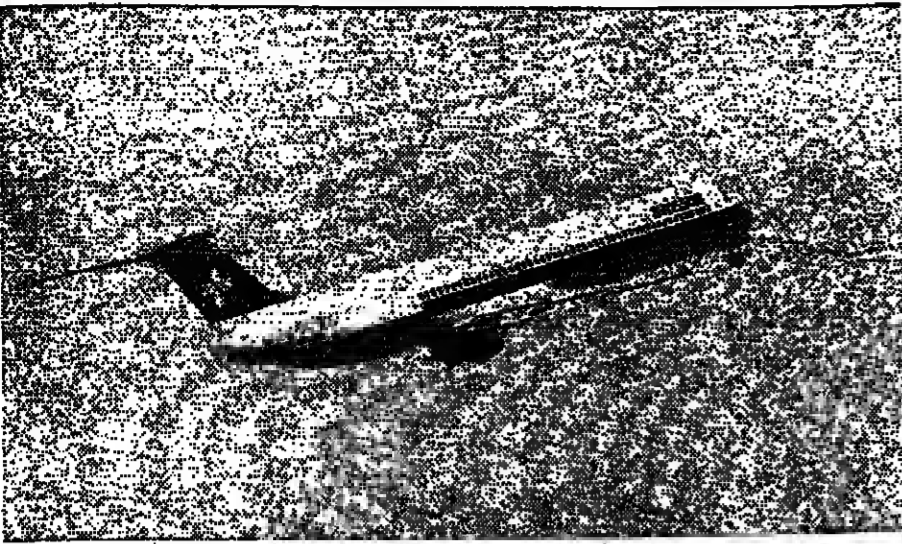
But although intermediate derivatives are good 'stop-gap' measures, they are still basically designed around 1960s airframe technology. Now, new technologies have been developed which permit the evolution of a new generation of single aisle aircraft bringing dramatic improvements in operating efficiency and costs.

And only Airbus Industrie is able to blend these advanced technologies with its unique experience gained in high-technology short/medium range operation and design with the successful A300 and A310. The result: the all new 150-seat A320, offering the world's airlines levels of efficiency way beyond the reach of any of the intermediate derivatives.



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NEW AIRLINERS III



The 1,000th Douglas DC-9 twin-engine airliner (above) made its maiden flight recently—a Super 80 model, it is the latest version of this highly-successful aircraft. Overall orders and options for DC-9s stand at more than 1,100. Centre: The first Boeing 757 made its maiden flight last month. Six airlines have given orders for a total of 121 aircraft. The McDonnell Douglas DC-8 Series 71 (right) is a re-engined model, fitted with the new Franco-U.S. CFM-56 fuel-efficient power plants to extend the life of this successful aircraft

U.S. makers stay dominant despite Lockheed pull-out

THE WORLD airliner manufacturing scene continues to be dominated by the U.S. But the pattern of development through the post-war period, in which three names—Boeing, Lockheed and McDonnell Douglas—have been pre-eminent, is now changing.

Boeing remains paramount with over 4,670 jets delivered and a backlog of another 982 and production running at 24 jets a month. McDonnell Douglas is in second place with its DC-9 short-to-medium range and DC-10 medium-to-long range jet programmes.

But Lockheed, having consistently incurred heavy losses on its TriStar medium-to-long range jet venture, has decided to pull out of commercial jet airliner production after 1984, when the current backlog of TriStar orders is completed.

Lockheed's withdrawal will not make things any easier for the European competitor, Airbus Industrie, however, for both the other U.S. manufacturers are already moving to fill the gap that Lockheed will leave.

Boeing's range of aircraft is now so wide that it retains a commanding lead in world markets despite the inroads made on it in the short-to-medium range fields by Airbus Industrie. To date Boeing has no fewer than five separate jetliner programmes. They include the 130-seat twin-engine short-range 737 jet; the 140-seat twin-engine jet (production of which is now running down); the new 186-220-seat 757 short-

to-medium range twin-engine jet; the bigger twin-engine 230-240-seat 767, also for short-to-medium ranges; and the big long-range four-engine 747 Jumbo jet.

In addition, Boeing has studies under way for a large number of derivatives of all these programmes. Its great fund of jet airliner design, development and production knowledge is now so large that it could produce a new design (such as a 150-seater) within months and could build it in three years if necessary. It does not want to do so, however, because it is financially stretched (the new 737-300, the 757 and 767 are collectively costing more than \$2.5bn) and it is not encouraging talk of another new venture just yet. But if forced to compete in any new field, it will do so.

Rival

The 757 and 767 are entirely new jet airliners, intended to meet the growing demand for short-to-medium range aircraft of improved fuel efficiency over the next 20 years, replacing many of the existing generation of aircraft, including One-Twelves, Tridents, Caravelles and even some of the earliest Boeing 737s and 747s still in service. The 757 is a rival for the Airbus Industrie A-300, while the 767 is the direct competitor to the Airbus A-310. Boeing's own sales forecasts indicate a market up to 1992 for at least 1,100 in the broad 767/A-300

category, with a market for another 1,850 aircraft in the broad 757/A-310 category. It believes that it can win up to 55 per cent of these markets through the next decade.

To have developed two new airliners over the past three years, with its own money, is a remarkable achievement even for Boeing. The 757 is now well into its test-flight programme and is due for delivery to the airlines later this summer. To date, orders stand at 173 aircraft firm, from 17 airlines, with options on another 188.

The smaller 757 made its successful maiden flight on February 19. The order book stands at 121 aircraft firm from six airlines, with another 56 on option. First deliveries are due to Eastern Airlines of the U.S. (which has ordered 27 with 24 options) in December and to British Airways (which has ordered 49 with 18 on option) next January.

With the 737 Boeing believes it could develop a shortened fuselage model, the 757-50, as a possible contender in the future 150-seater airliner competition. With the 767 the developments could include a stretched fuselage model to carry more passengers; a long-range model capable of close to 5,000 miles range against the present 767's 3,000-plus miles; a "combi" passenger and freight version; and an all-cargo model. Boeing stresses that these are only studies and that it will not undertake any such developments until airlines place firm commitments.

Strengthened

The 737-300 includes an 8ft 8in fuselage stretch to enable it to seat 22 more passengers, at around 140, while the wing has been lengthened and strengthened. The aim has been to give the 737-300 a 20-year life, during which time it will make about 75,000 landings. Although it will have the same range as the existing 737-300, it will use much less fuel, make less noise and carry more passengers. It is expected to be built alongside the existing 737-300, which will continue in production for some time to come. The roll-out is expected in March, 1984, the first flight in April and delivery in November of that year.

With over 1,800 of the bigger 727 three-engine medium-range jets in service, Boeing has been looking at ways of improving that aircraft also. One possibility is to re-engine the 727,

installing two new-technology power-plants at the rear of the fuselage against the existing three, to give an improvement in fuel consumption of up to 28 per cent over the existing 727-300s now in service.

Boeing has discussed this programme with a number of airlines, but no decision to go ahead is expected until later this year.

Some of the most dramatic improvements to any existing airliner programme, however, are involved in the 747 Jumbo jet.

Without changing the wing or lengthening the fuselage, the famous "upper deck" of this largest of all commercial airliners has already been extended by 23 ft to the rear to accommodate up to 44 more passengers, giving the aircraft about 500 passengers a time. This gives airlines an improvement of up to 5 per cent in the amount of fuel burned per seat.

Beyond that Boeing has many ideas for the 747. These include putting on a new wing and stretching the fuselage, to give capacity for between 550 and 700 passengers, as well as perhaps stretching the upper deck all the way to the tail to give capacity for up to 800 passengers. These will be expensive developments, however, and Boeing says it will not undertake any of them until it has firm airline commitments.

Like Boeing, McDonnell Douglas believes that the present recession will be followed

by a resurgence of a traffic and equipment orders. When such a turn-round occurs the current McDonnell Douglas project range of short-to-medium range DC-9 jets and medium-to-long range DC-10 wide-bodied airliners, together with the derivatives of both now under study, "should capture a significant share of revived and growing markets," says the company.

Earlier fears that the DC-10 line might have to be closed because of the current recession in air travel appear to have been staved off as a result of the U.S. Air Force's decision to order another 44 KC-10s—the military tanker/transport version of the DC-10—subject to Congressional approval. This decision will enable McDonnell Douglas to keep the basic DC-10 production line open through the next two to three years, and enable it to continue work on derivatives of that aircraft to capture new markets in the mid to late 1980s.

On the DC-9 programme, total orders (including conditional orders and options) stood at 1,115 aircraft at the end of 1981, of which 1,033 had been delivered.

Freighter

McDonnell Douglas has plans for derivatives which could extend the spectrum of uses for both types of aircraft. These include the long-range "Super DC-10", with passenger capacity varying between 250 and 330, but averaging about 297.

Several different versions of the new "Super 10" are envisaged, including a freighter model; a stretched version to accommodate 342 passengers; another variant for use from high-altitude airports using more powerful engines; and a shortened fuselage version for fewer passengers but with longer-range capability.

Besides the "Super 10" McDonnell Douglas is also studying possible derivatives of its longer-range "intercontinental" models—the Series 30 and Series 40 DC-10s. These derivatives would offer added passenger capacity (up to about 80 more seats) through the use of lengthened cabins and more powerful engines (up to 59,000 lb thrust).

With the DC-9 the company is also looking at derivatives, including the Super 80 capable of carrying 155 passengers and the Super 30 capable of carrying 112 passengers.

The objective, as with the DC-10 medium-to-long range improvements, would be to capitalise on the heavy investment of several billion dollars made to date in the short-to-medium range market and by spreading a limited further run to ensure a place for the DC-9 in the airline fleets of the future.

McDonnell Douglas believes that even with any future development of the specialised 150-seater type aircraft there is still likely to be a market for the DC-9 derivatives through to the end of this century, and it sees no clash

of interest between these ventures.

Lockheed Aircraft Corporation, the other major U.S. manufacturer of jet airliners, has found the competition in wide-bodied jets much tougher than either of the other two, and after losses of \$2.5bn on the programme has decided to end production of the L-1011 TriStar in 1984, when the last of the 21 aircraft still on firm order has been delivered.

It is possible that the termination date may be extended beyond 1984 if the company is successful in convincing the holders of outstanding options on 49 aircraft that they should convert them to firm contracts, but even this will not alter the company's decision to cut its losses and get out of wide-bodied commercial jet airliner production eventually.

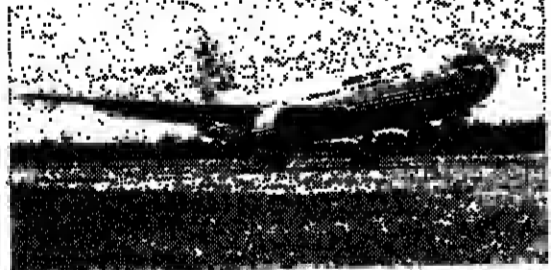
The decision to end TriStar development and production will cost the company some \$396m which is being written off in the 1981 accounts. Lockheed sold only five TriStars in 1981, and the firm order backlog of 21 aircraft up to 1984 compares with the annual production rate of between 20 and 24 aircraft needed to make the programme viable.

Lockheed will continue support current TriStar customers—there are 220 TriStars in service—for as long as is necessary, but ahead as is necessary will Rolls-Royce on the RB- engines used in that aircraft

Five weeks after its maiden flight, we brought Boeing's 767 down to earth

We refer, of course, to the very first 767 flight simulator—now delivered and installed at Boeing's new flight training centre in Seattle.

Good timing, you may think, considering the aircraft made its highly successful maiden flight



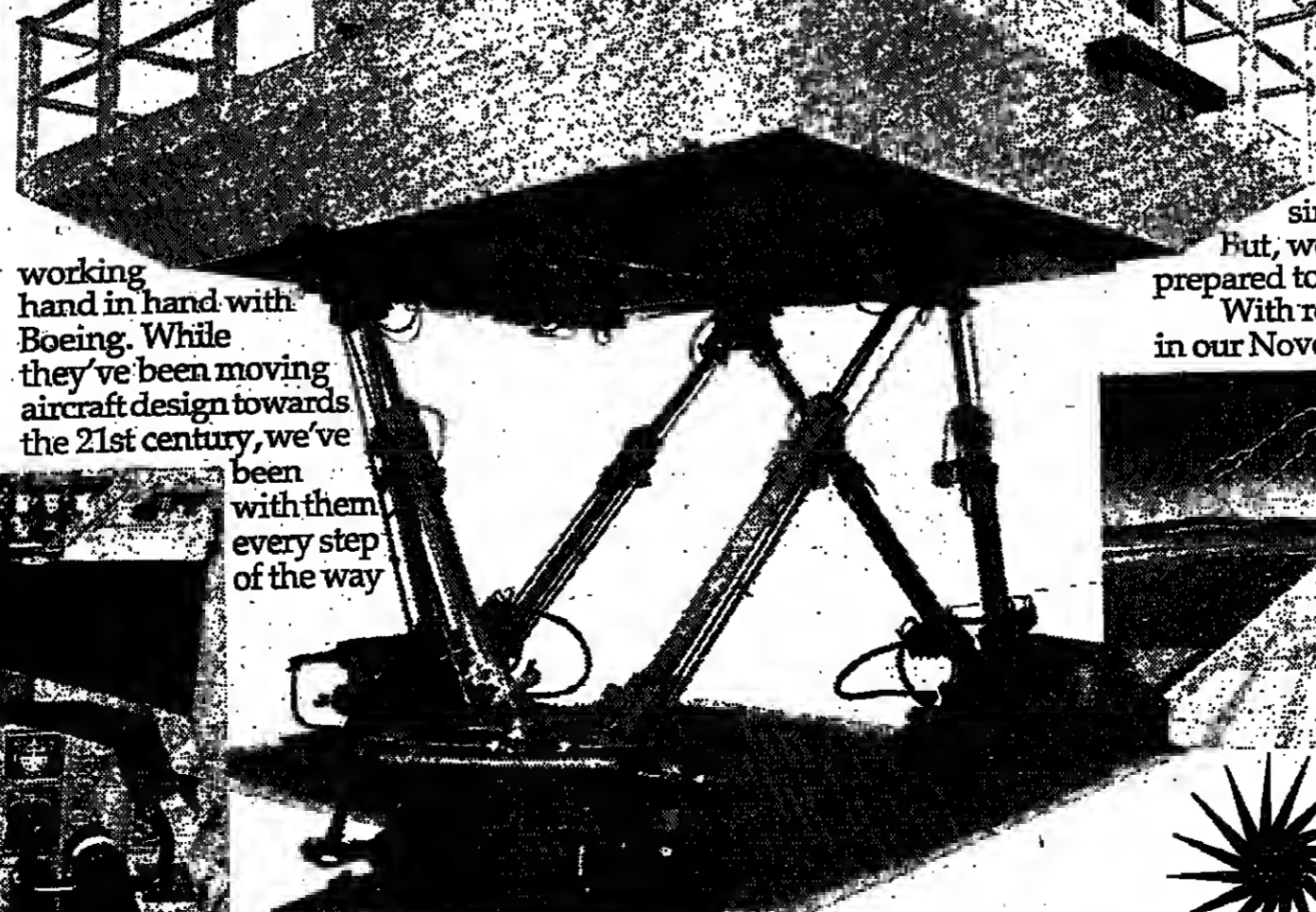
only last September. In fact, rather less dramatically, the simulator was making its maiden flight just five weeks later in our Crawley factory.

Currently we're building ten simulators for The Boeing Company including those for both 757 and 767 types.

It's these simulators which will train crews to take a totally new generation of aircraft into

airline service. And, for many pilots, our simulators will provide the first 'hands-on' experience of the integrated flight decks of the future. Flight decks that use computers and instruments to gather, process and display data designed to maximise their operational efficiency.

How have we achieved all this? Quite simply by



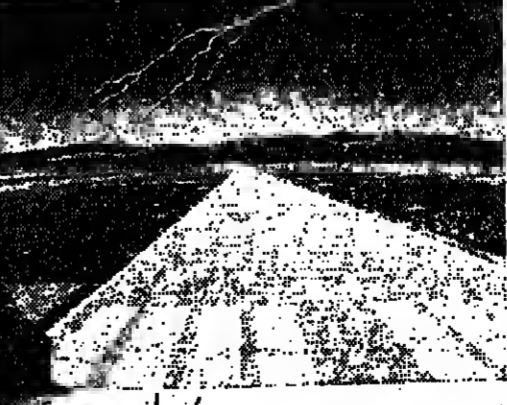
working hand in hand with Boeing. While they've been moving aircraft design towards the 21st century, we've been with them every step of the way

in advanced technology flight simulation. In fact, thanks particularly to our technology and delivery performance, we've established a world leadership in the very competitive airline flight simulation business.

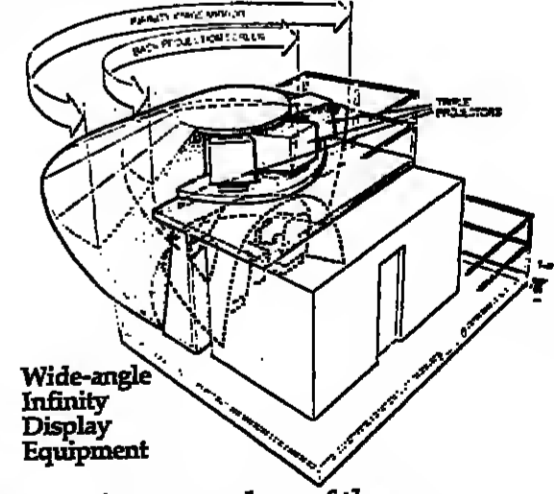
Right now we're working on 25 major simulator projects including B767's for TWA in the United States, Pacific Western in Canada and ANA in Japan.

Last year, in the United States, under new Federal Aviation Administration legislation we established a 12 month lead over our competitors in meeting the goal of 'zero flight time' simulation.

But, we're not a company prepared to rest on our laurels. With recent developments in our Novoview Computer

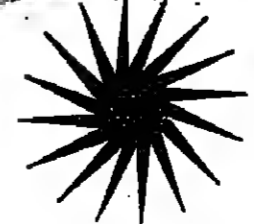


Generated Image systems we'll be visually simulating special weather effects that will allow an even greater transfer of training from aircraft to simulator. Later this year, the first simulators to incorporate a revolutionary panoramic display system will enter service with Air Florida and British Airways Helicopters.



As a member of the Rediffusion Group we're part of a world-wide organisation which has interests spanning computers, communications and electronics as well as, of course, the sale and rental of television and video equipment.

If you would like to know more about our activities in flight simulation generally, or new aircraft types in particular, please contact our Public Relations department.



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NEW AIRLINERS IV

The Airbus consortium is ready for further sales battles against its U.S. rivals

Europe strengthening its position

OVER THE past decade, Airbus Industrie, the European consortium building the 250-seat A-300 and the smaller 200-seat A-310 Airbus, has risen rapidly, to become the world's largest builder of wide-bodied jets after Boeing.

Increasingly in the future, it seems likely that the major sales battles throughout the world in the short-to-medium range markets will become fiercer, with the A-300 ranged against the Boeing 767, and the A-310 ranged against the Boeing 757. Already, Airbus Industrie has dealt Boeing some severe blows in non-U.S. markets, especially in the Third World.

Conversely, apart from its big order from Eastern Airlines (the biggest single Airbus customer) Airbus Industrie has been singularly unsuccessful in breaking into the potentially substantial U.S. market, although it has not given up trying.

Airbus Industrie, whose principal partners include Aerospatiale of France, British Aerospace (with a 20 per cent stake), Deutsche Airbus and CASA of Spain, with Fokker of Holland and Belairbus of Belgium as associates, represents the culmination of efforts by European governments and aerospace industries to establish a civil aircraft manufacturing capability on this side of the Atlantic that would reduce the U.S. dominance in world airliner markets.

Founders

Since its establishment in the late 1960s, it has succeeded beyond the dreams of its original founders, and is today still strengthening its position. To date, Airbus Industrie has announced firm orders and options for a total of 507 Airbus from 44 airlines, of which 348 are firm orders and 159 are options. This figure is divided further into 327 A-300s (258 firm and 69 option) and 180 A-310s (90 firm and 90 option).

By comparison, Boeing has won firm orders for 173 of its 767s, with another 138 on option, and for 121 of its smaller 757s, with another 56 on option, a combined total of 488 aircraft. In the short-to-medium range market.

So far, other than the 150-seater, Airbus Industrie has not begun to develop other types

of aircraft that could challenge the Boeing supremacy in other markets, such as the short-range 737, for example, or in the very long-haul markets, dominated by the 747 Jumbo, and it seems likely that for the immediate future its activities will continue to be concentrated in the short-to-medium range field.

Also, Airbus Industrie recognises that its best opportunities for the future still lie in the developing world, especially among smaller and comparatively young airlines with substantial growth potential through the rest of this century. It is in this field that Airbus Industrie has picked up many of its most significant orders, and it is being assiduously cultivated by its sales teams.

With 162 aircraft delivered so far, and another 343 to be delivered, Airbus Industrie is now expanding its production rate. During 1981, it raised production at its Toulouse factory from 3.6 aircraft a month at the start of the year to 4.2 a month by December, and plans to continue this expansion as market requirements dictate, until peak production of eight aircraft a month is reached in 1984.

Already, Airbus Industrie is working on parts for Airbus up to aircraft number 840, and production of a further batch of aircraft up to aircraft number 436 will start in mid-1982. Orders for long-date materials have already been placed for aircraft up to number 523. The delivery of Airbus No. 500 is planned for April, 1986. By that time, it is hoped that the present recession will be a thing of the past, and that the Airbus order book will have soared to over the 700 aircraft mark.

The precise investment in the Airbus programme has never been publicly quantified, but is probably now well in excess of \$2bn, and the break-even number of aircraft needed is between 600 and 700. It is not expected that the programme will become profitable until the mid-to-late 1980s, but the value of Airbus Industrie in the European aerospace community, and to the European economy as a whole, is incalculable.

Had it not existed, the 505 aircraft already ordered and

optioned, worth an estimated \$15bn at a minimum, apart from the value of spares (which effectively doubles the total), would have gone automatically to the U.S. aerospace industry. This would have been a total loss of business to the European aerospace community, and a heavy drain on the dollar resources of the European airlines and their governments.

Airbus Industrie's plans to develop a new 150-seater aircraft the A-320, are discussed elsewhere in this survey. Beyond the A-320, however, Airbus Industrie has plans for an even wider range of aircraft. These include the TA (for Twin Aisle) 9, which will be a stretched version of the A-300 for medium-range routes carrying up to about 300-350 passengers; and the TA-11, a 200-seat, four-engine regional aircraft of flying very long distances but with smaller passenger loads than now carried by the Boeing 747 Jumbo jets.

Another possible member of the Airbus family is also under study. This would be a long-range, twin-engine regional aircraft designated TA-12, with special interest for those airlines seeking to fly non-oceanic routes of up to 4,500 nautical miles and with operations from hot and high airfields.

Decided

Since Airbus Industrie has already decided in principle to concentrate its resources on the A-300, A-310 and now also the A-320, it may be some time before any commitments are made on either the TA-9 or TA-11 and in any event it seems likely that decisions will only be taken in the light of airline orders for such ventures. These in turn are not likely to occur until the recession is over and air travel is developing strongly again (although Lufthansa is very interested in the TA-11).

For the immediate future, the emphasis in Airbus Industrie will be on the three current programmes, which will be more than sufficient to keep the organisation fully stretched, especially if order books continue to expand.

Nevertheless, the long-term ambition of the Airbus Industrie management is to widen eventually the spectrum of activities, creating an even

larger European airliner manufacturing organisation that will challenge the U.S. across the whole field of commercial airliner manufacture.

Another major element of the European challenge that is being mounted against U.S. dominance in world airliner markets is that by British Aerospace.

Apart from BAE's immediate direct 20 per cent stake in Airbus Industrie, representing an investment of up to £250m, which gives it a big share of the work on the A-300 and A-310 (building the wings and also with an overall design consultancy role), as well as a possible stake in the projected A-320, the UK group is mounting its own challenge in a variety of ways.

Prominent among these is its four-engine regional airliner, the BAe 146, which is now in quantity production, with two aircraft already well into the flight-test programme. This project is the first British civil airliner for 18 years and means an investment of up to £350m, of which about 80 per cent will have been incurred by 1984. Designed to carry up to 109 passengers on short-haul routes, it is intended to be a true "bus-stop" jet with low noise and pollution from its four Avco Lycoming engines and very low fuel consumption.

In addition to the 146, BAE has other major projects in hand. The first 19-seat Jetstream 31 twin turbo-propeller executive and commuter airliner has just been rolled out, representing, with an investment of over £20m, BAE's bid to win a major stake in this expanding market. The group is also continuing to sell its highly successful 40-passenger BAe 748 twin turbo-prop feeder-liner, and is progressively improving this aircraft. An improved and enlarged version of it for world markets is also being planned. A decision on the latter venture may be taken later this year.

Another significant contributor to the new generation of airliners is Short Brothers of Belfast. Apart from this company's heavy involvement in commuter airliner production, discussed elsewhere in this survey, it is also heavily engaged in the engine-podding business, producing pods for Rolls-Royce RB-211s for

TriStars, 747 Jumbo jets, and the Boeing 757s, as well as for the Avco Lycoming ALF-502H engines used in the British Aerospace 146, and for the Pratt and Whitney PW-2037 engines for the Boeing 757.

Elsewhere in Europe, the challenge to U.S. dominance in world airliner markets is being maintained by Fokker of Holland, which is continuing production of its 52-seat F-27 Friendship twin-turbo-prop airliner, of which well over 700 have been delivered, and its 85-seat F-28 twin-engine Fellowship jetliner, of which over 174 have been delivered. Production of both types of aircraft will continue for some time to come.

Although Fokker has ended its pact with McDonnell Douglas to develop a 150-seater airliner, the Dutch company is to continue its studies, although what will now emerge from them remains to be seen. The possibility of Fokker joining Airbus Industrie to work on the A-320 venture cannot be dismissed.

So far as Aerospaziale of France is concerned, its emphasis in the airliner field is placed on its membership of Airbus Industrie, but the company has also branched out into the commuter airliner field in conjunction with Aeritalia of Italy on the development of the ATR-42, discussed later in this survey.

Finances put a brake on interest shown by airlines

Market for 150-seater emerging

OF ALL the new airliner programmes now either under development, or being discussed for the future, none has generated so much interest among manufacturers as the projected short-to-medium range 150-seater, although this enthusiasm is not so far reciprocated by the airlines.

While it is widely accepted that a market is emerging for such an aircraft, between the 140-seat Boeing 737-300 at the lower end of the scale, and the larger 186-seat Boeing 757, most of the airlines are not yet ready to commit themselves with orders. Nevertheless, most of them involved in short-to-medium range transport can see a need towards the later 1980s for an aircraft capable of carrying about 150-170 passengers over distances of between 1,500 and 2,500 miles. The market for such an aircraft has been estimated at upwards of 1,000, perhaps reaching as many as 1,500 through to the end of the century.

The initial enthusiasm for such an aircraft has been in the U.S. where a few major airlines, such as Delta and United, issued specifications for such an airliner some time ago. Since then other airlines have slowly begun to accept that such an aircraft, embodying entirely new engines giving substantially improved fuel consumption and with other new technological advances, such as a greater use of composite materials to reduce weight (and thus also improve fuel consumption), could be useful.

Cautious

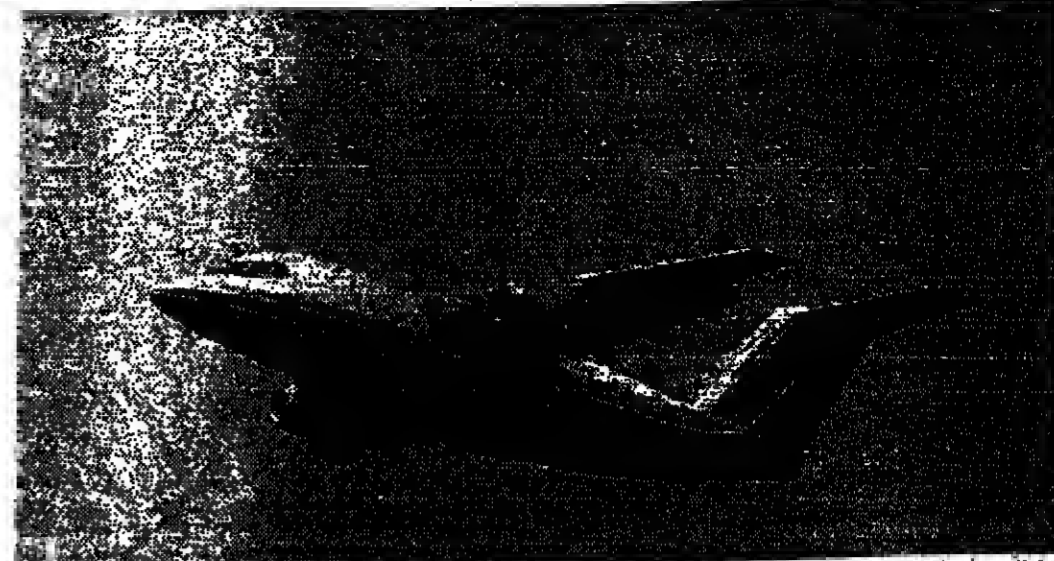
But the precise date of entry into service of such an aircraft is far from clear, even in the airlines' own minds. While showing much private interest in such a venture, few are prepared to be so enthusiastic openly because of the perilous state of their finances. While some, such as Delta, have suggested that such an aircraft could be needed by 1986, others are more cautious, setting the requirement back to 1988-89.

By then, it is argued, the recession which has so severely eroded airline finances will be a thing of the past and world air travel will be expanding strongly again, especially in the short-to-medium range markets, where the bulk of the world's air travel already occurs.

But whenever the aircraft emerges, it seems that the over-all market will offer rich pickings for the aircraft manufacturers. Even if the conservative estimate of only 1,000 aircraft is taken, at about \$30m per aircraft the market is likely to be worth \$30bn, excluding spares. It is not surprising, therefore, that most of the world's major airlines and engine manufacturers are interested in such a prospect, but with varying degrees of enthusiasm.

Of the main contenders in the airframe field, Airbus Industrie of Western Europe is the most enthusiastic, pushing ahead with its A-320 design and claiming that the aircraft could be developed in time to enter service by 1986. McDonnell Douglas of the U.S. had originally linked with Fokker of Holland to develop the joint MDP-100 design but this appears not to have been a very happy partnership, and it has been terminated by both sides by mutual agreement. Each of those companies, however, has said it intends to continue with studies on a potential 150-seater—the potential rewards are too great for them to ignore.

This opens the possibility of



The British Aerospace BAe146 four-engine feeder-liner (above) is now well into its flight trials. The latest addition to the Airbus family, the A-310 (below), was rolled out at Toulouse in February and is due to fly soon.



The Airbus A-310 regional airliner, a twin-engine aircraft with a high-wing configuration, shown in flight.

Finances put a brake on interest shown by airlines

Market for 150-seater emerging

Fokker now joining Airbus Industrie on the A-320 venture, or even re-opening talks it held some time ago with Boeing on possible collaboration.

In the meantime, McDonnell Douglas is more cautious than Airbus Industrie, suggesting that perhaps 1987 is a more realistic time scale, although also arguing that if the market improves dramatically the aircraft could be produced earlier.

Boeing is the most cautious, arguing that 1988 or even perhaps 1989 might be a more realistic timing for the new jet. Boeing's caution is perhaps tinged with the fact that it is already spending \$2.5bn in developing three other new jetliners (the 737-300, the 757 and 767) and does not want to get involved in another project just as it is conducting a wide range of studies, under the umbrella designation "7 Dash 7," and it is likely to be a formidable competitor for the others no matter when the aircraft is needed.

Boeing is probably in the strongest position of all, because simply by producing derivatives of its existing jets it can successfully "box in" any project produced by either Airbus Industrie or anyone else. For example, its studies include another derivative of the 737, called the 737-400, which would use existing engines but have a new wing. Another study is for a 737-500, with both new engines and a new wing. Yet another is for a shortened fuselage version of the 737, to carry 150 passengers. It could even start afresh with an entirely new design.

In all cases the designs being mooted to meet the potential market are still in their comparatively early stages, and no final launch commitments have yet been made. These are likely to wait some firm commitments from the airlines, with few signs of these forthcoming. So far only Air France has made a conditional order for 50 A-320s, but this will lapse if that venture is not formally launched this spring.

Governments are also likely to become involved, where the A-320 is concerned. Although the French Government has pledged support for the A-320, neither the West German nor UK Government has made up its mind on support for that project. Nor have the aerospace industries of those two countries settled the details of which parts of the aircraft they want to build, and how much investment they will subscribe to the programme.

Options
British Aerospace has been discussing a number of possible options with the UK Government and within Airbus Industrie, including the possible development of the forward fuselage and flight deck, manufacture of the tail unit, continued production of wings, as with the A-300 and A-310, or even undertaking final assembly of the aircraft in the UK from parts sent in by all the other partner countries.

Depending on which of these possibilities is finally adopted, the UK could get a share of the A-320 ranging up to about 30 per cent (another possible option, of course, is not to participate in the A-320 at all, but this seems unlikely). But the UK will be heavy, perhaps as much as £400m over the next few years, and the UK Government will probably have to find the bulk of this in launching aid.

Airbus Industrie has been

hoping to get its A-320 partnership arrangements settled in the first half of this year, so as to be able to press ahead with the aircraft with a 1986 in-service date in mind, but it seems that this date is likely to slip, and the A-320 may not emerge until 1987 or perhaps even later.

All the contenders would like international collaboration on their projects. All have been wooing the Japanese aerospace industry in a bid to get both cash and work capacity (and hopefully also a substantial volume of sales in the big Japanese market for this type of aircraft), but so far no decisions have been taken by either the Japanese Government (through the Ministry of International Trade and Industry) or the companies involved.

Dialogue

Airbus Industrie has signed a Memorandum of Understanding with three Australian aerospace companies for participation by them in the A-320 venture; discussions on the precise participation by those organisations are now in progress.

Boeing maintains a dialogue with most overseas aerospace manufacturers with a view to the possible collaboration by some of them on the projected "7 Dash 7" venture.

Boeing is already working with the Japanese and Aeritalia of Italy on the 767 airliner, and would clearly like to have some smaller overseas contributions on any new airliner programme. Clarification of all these international moves seems likely some time during the coming year.

The competition among the engine manufacturers for their share of the 150-seater market is likely to be just as fierce, but is just as clouded. The value of the engine business

is likely to be up one-third of the total, or about \$16bn, excluding spares.

Rolls-Royce has already linked with the three Japanese aero-engine manufacturers (Isihawajima Harima Heavy Industries, Kawasaki Heavy Industries and Mitsubishi Heavy Industries), to form a joint company, Rolls-Royce and Japanese Aero-Engines, to develop an entirely new 24,000 lb engine, the RJ-500.

Work on this has been pushed forward fast, with those companies' private funds, and two "demonstrator" engines aimed at proving the overall soundness of the design have been built, in Derby and Tokyo.

Full-scale launching of the development of the RJ-500 with UK Government cash support, however, is not likely to occur until a commitment to use the engine has been made by an airframe manufacturer, and orders received from airlines.

On present reckoning this could come later this year. Meanwhile Rolls-Royce and Japanese Aero-Engines are holding talks with other potential partners, including Pratt and Whitney and General Electric of the U.S. and Snecma of France with a view to perhaps bringing one or more of them in to share the burden of development costs, ease the technical problems involved in developing the engine and widen the potential market.

Just how far such talks will go remains to be seen. But certainly so far Pratt and Whitney has made it clear that it intends to offer fierce competition to the RJ-500 if there is no collaborative agreement. It is already working on the development of a new engine in the 25,000 lb thrust category to compete in the 150-seater market, and the company has made no secret of the fact that it intends to capture the lion's share of the market if it can.

Graviner Fire and Overheat Protection Systems fitted to A310

Graviner Ltd., a major U.K. manufacturer specialising in Fire Detection and Extinguishing Systems for the Aviation Industry, supplies sophisticated equipment for Airbus A310.

Graviner Fire Protection Systems producing Fire Detection Systems for the Pratt and Whitney and General Electric engines, together with the Auxiliary Power Unit.

The Graviner FIREWIRE Continuous Element Detection System not only generates an input to the aircraft fire warning system, but also provides the crew with an audible and visual fire warning.

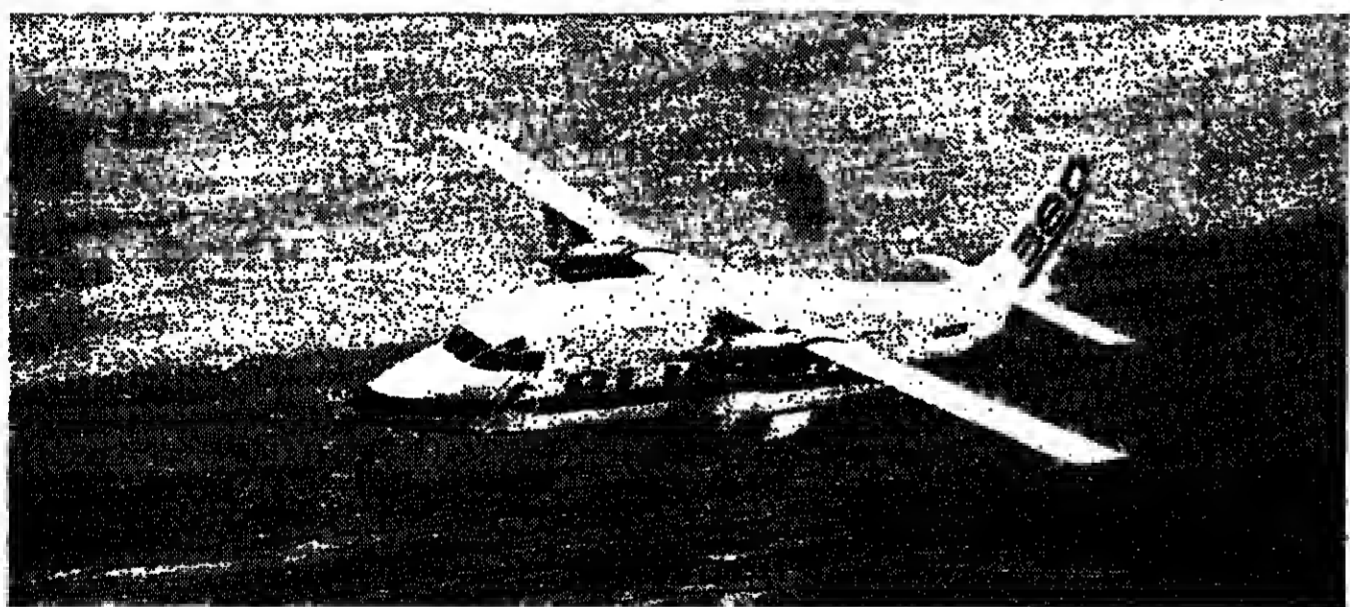
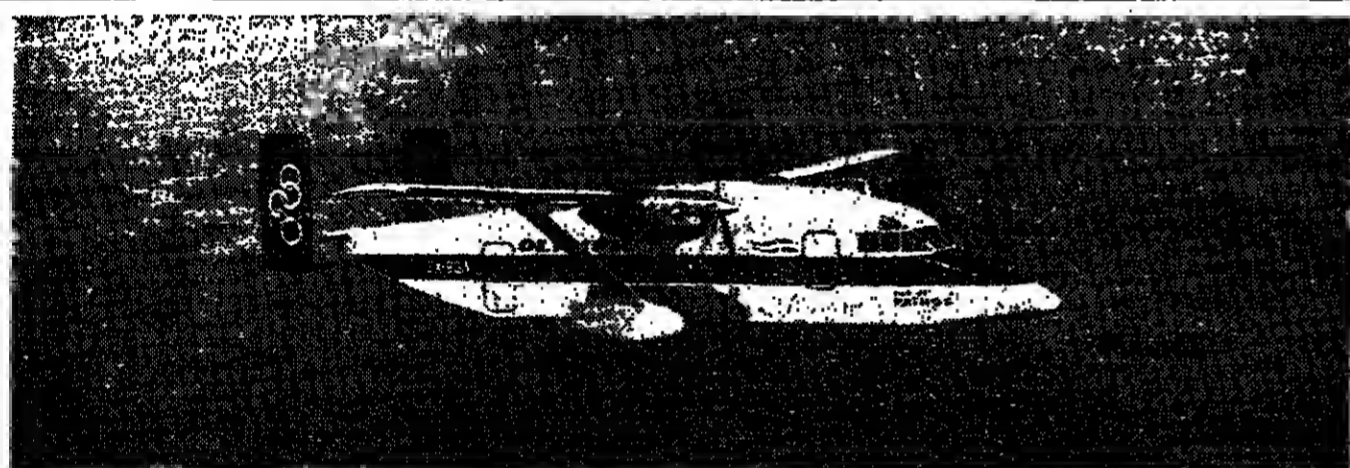
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SHORTS

NEW AIRLINERS V

Savings in fuel consumption are becoming the yardstick for commercial success

Engine builders in fierce struggle for market share

THE BATTLE among the world's major aero-engine manufacturers for a share in the big markets of the future is already just as intense as that between the airframe manufacturers, and is likely to become even fiercer through the 1980s.

With about one-third of the total aircraft market of \$140bn, or about \$50-\$60bn, likely to be spent on aero-engines of all kinds, the rewards for the successful manufacturers will be substantial.

The aero-engine builders are of special importance where the "new generation" airliners are concerned, for the engine is always regarded as the "pacing factor" in aircraft design.

This puts not only a special responsibility, but also a strain, on the aero-engine companies, for designing and bidding an engine is a very expensive and high-risk business.

It can take up to ten years from initial conception before any profits emerge from any aero-engine, but if the project is successful, the rewards can be immense, extending perhaps over 20 to 30 years.

Profits. Gauging the market is a skilled business, and the engine companies do not always succeed in being in the right place at the right time.

who seem likely now to dominate supply to those two aircraft for many years to come. That lesson has not been lost on Rolls-Royce, which is now well out in front with the joint UK-Japanese RJ-500 for the prospective 150-seater market, but even that engine project remains subject to Government financial support, and awaits acceptance by airframe manufacturers and orders from airlines.

In the sales battles that lie ahead, fuel consumption will play a far greater role than ever before. At a time when airlines' fuel costs are already around 30 per cent of their total operating costs, every 1 per cent improvement in fuel consumption can mean several million dollars a year saved on fuel bills over an airline's fleet.

The first of the new generation of airliners to emerge, the semi-wide-bodied Boeing 767 twin-engine aircraft, has opened a major sales battle between the two U.S. giants, General Electric with its CF6-80A and Pratt and Whitney, with its JT9D-7RAD engines.

So far, the battle for the 767 market is evenly matched, but it is a fierce one with neither side giving anything away to its rival. So far, Rolls-Royce is not involved. Although its RB-211-524 was—and still is—available, so far no airline has chosen to adopt it for the 767.

Rolls-Royce is heavily engaged, however, in the battle with Pratt and Whitney for the engines in the new Boeing 757 twin-engine short-haul jet airliner.

Rolls-Royce has developed its Dash 535C version of the RB-211 engine, of 37,400 lbs thrust, for the initial Boeing 757s that will go into service at the end of this year and during 1983, in competition with the Pratt and Whitney PW-2037. But Rolls-Royce is already developing an improved version, the EA, of 40,100 lbs thrust, which will cut the fuel used by the 757 by about 10 per cent compared with the initial 535C.

Some of the 757 customers will change their 535C engines to the EA version from 1984. Total orders for Rolls-Royce-powered Boeing 757s so far amount to 101 aircraft firm and on option, from five airlines—British Airways, Eastern, Monarch of the UK, Transbrasil and Air Florida.

Alloys. Beyond the EA version of the Dash 535, however, Rolls-Royce is developing the F4, a higher-thrust variant designed especially for use in long-haul aircraft, such as the Boeing 747 Jumbo and the DC-10. This version of the engine will offer further improvements in fuel consumption, and is due to enter service in 1985.

Features of both the EA and F4 engines will be the much greater use of new materials, including advanced high temperature titanium alloys, lightweight Kevlar components, carbon fibre nacelles and thermal barrier coatings on the high-pressure turbine blades. These are all intended to help reduce weight, improve fuel consumption, and also reduce noise.

The F4 version of the engine could be of considerable significance to Rolls-Royce, especially if it helps to widen the market for the company's engines in the 747 Jumbo, and enables it to win orders on new versions of the DC-10 (a market Rolls-Royce has not yet been able to break into). With the Lockheed TriStar production now being ended, it will become even more vital for Rolls-Royce to capture new markets for its engines.

The F4 is coming forward at just the right time, when the other major manufacturers, Boeing and McDonnell Douglas are considering new versions of their long-haul aircraft.

But there is formidable competition from Pratt and Whitney's new PW-2037, a 37,000-lb thrust engine which has already run at 38,000 lb thrust. Pratt and Whitney claims that when compared to the first generation turbofan engines it will replace such as JT-8Ds, the

PW-2037 will offer more than 30 per cent improvements in fuel consumption, or savings equivalent to \$1m per aircraft per year. Additional technical improvements to reduce fuel consumption even further will be incorporated as the engine is developed in airline service.

As with Rolls-Royce, Pratt and Whitney has done much to improve the technology of aero-engine manufacture. Among the improvements that will be incorporated in the PW-2037 are single-crystal turbine blades, nickel-based super alloy compressor discs, and a new digital engine control system developed for the PW-2037 by United Technologies' Hamilton Standard Division.

These features, says Pratt and Whitney, have enabled it to design a lighter-weight engine with substantial benefits in improved fuel consumption. Pratt and Whitney is aided in the development and production of the PW-2037 by Motoren-und Turbinen-Union of West Germany (11 per cent) and Fiat Aviazione of Italy (4 per cent). The engine has already been selected by Delta Air Lines and American Airlines of the U.S. and by Transbrasil (which has chosen both the Pratt and Whitney and Rolls-Royce engines) to power their fleets of Boeing 757 jet airliners.

Competitor. General Electric of the U.S., the other of the "big three" aero-engine builders, is also in the hunt for orders with its new CF6-80 series of engines in the 48,000 lb thrust class for such aircraft as the Boeing 767 and the Airbus A-310.

So far, 13 airlines have ordered CF6-80-powered aircraft and in both types of aircraft the only competitor so far is Pratt and Whitney.

General Electric is also developing a bigger-thrust version of the CF6-80, the "C" model, which will offer up to 59,000 lbs thrust. This will be used in such new aircraft as the Series 600 version of the A-300 Airbus, the stretched upper-deck version of the 747 Jumbo jet and any stretched derivative of the 767 (such as the 777) that may emerge. The company says that today more than 5,800 GE engines are in service in nearly



Rolls-Royce RB-211 Dash 535C engines being prepared for despatch to the U.S. for the Boeing 757. Now the company is developing an improved version which is expected to cut fuel costs by 10 per cent. It can take 10 years from initial conception for an engine to produce profits but the rewards can be immense

High sales of commuter aircraft expected

ONE OF THE most rapidly developing sectors of world air transport is the so-called "regional" or "commuter" airliner market. These names are frequently used to denote the same type of market, although in fact the "regional" type of airliner is one seating between 50 and 100 passengers, and the "commuter" type is a rather smaller aircraft, seating up to 50 passengers.

Overall, however, this broad category of aircraft is currently one of the most promising in the world for the airframe and engine manufacturers. Over the next 10 years, it has been estimated, it could provide sales of more than 1,000 aircraft, worth between \$5bn and \$10bn, with perhaps as many again being ordered through the 1980s.

Primarily, these aircraft are designed to serve small, comparatively rudimentary airfields, even of the "grass strip" variety, and to provide the closest thing to "bus-stop" operations yet seen in commercial aviation.

It is this type of operation that is becoming popular in the U.S., and to a lesser extent in Western Europe, not only in providing feeder services from remote points to the larger "hub" airports, but also in linking smaller communities together directly.

But these new small airliners have an even more significant, and potentially lucrative, role to play in helping the air transport development of countries in the Third World. In many parts of the globe, air transport is only now beginning to be accepted as a tool of economic, industrial and social development, and the demand for small, cheap to buy and fly types of aircraft is expanding rapidly in many countries in South America, Africa, South-East Asia and the Far East.

It is significant that the generation of commuter airliners comprises entirely turbo-propeller driven types, mostly twin-engine (although the de Havilland Canada Dash Seven has four engines).

The reason is that in the under-developed regions of the world where much of the business will lie, cheapness of operation and ease of maintenance under difficult terrain

and climatic conditions is of critical importance. The generation of aircraft now being developed will be just as useful in opening up the air transport systems of underdeveloped countries (the regional pole) as for providing more sophisticated inter-urban services (the commuter role) in the UK, U.S. and Western Europe.

A recent analysis shows that there are now more than 20 separate manufacturers involved in the regional and commuter airliner industry, offering between them over 30 different types of aircraft, of almost bewildering variety. They range from the small nine-seat Piper T-1040, through existing 19-passenger aircraft of the Embraer (Brazil) Bandeirante type (one of the most successful commuter airliners yet built) with sales of over 350 aircraft), through to the new Embraer Brasilia and up to the de Havilland Canada Dash Eight of 36 seats and the 50-seat Dash Seven.

Prototype. In Western Europe, considerable interest has been shown in the development of the commuter airliner, and several major new programmes are under way.

Saab of Sweden has joined Fairchild Industries of the U.S. to develop the SF-340, a twin-engine turbo-prop airliner, seating 34, now in production with the prototype maiden flight planned for late 1982 or early in 1983, and deliveries to customers early in 1984. More than 100 orders for this aircraft have already been placed worldwide.

In France and Italy, government approval has been given for the collaborative (50/50) development of the ATR-42, also a twin turbo-prop engine airliner, seating between 42 and 49 passengers and aimed at ranges of 1,500 km. The two manufacturers, Aerospatiale of France and Aeritalia of Italy, hope to win sales for up to 900 aircraft over the next 20 years.

Already, orders and options for the ATR-42 stand at over 50 aircraft, with letters of intent for another 30. Of the 14 customer airlines involved, five are in the U.S.

CONTINUED ON NEXT PAGE

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MCDONNELL DOUGLAS

NEW AIRLINERS VI

Technological advances will make aircraft easier to fly and cut fuel bills. Aerodynamic changes will improve performance and safety.

Intensive search on to reduce weight

THE NEW AIRLINERS now either in production or planned for the future will differ in many ways from their predecessors, although these differences may not always be apparent to passengers.

Primarily, the aim of the new aircraft will be to save fuel in every possible way, in some cases by as much as 40 per cent over the older aircraft they will replace. These savings will come either from the use of new and improved engines, or from aerodynamic improvements to the aircraft shapes themselves, or from a wide variety of other techniques used to reduce the overall gross weight of the aircraft, so that less power will be needed to get them through the ground and propel them through the air.

The search to reduce weight—which in turn reduces fuel consumption—is being carried to considerable lengths. Some airlines are cutting out meals and galleys entirely on short-haul flights, and putting in extra seats; others are eliminating seat pocket give-away magazines or reducing them in size; others are reducing the amount of water they carry in toilets.

Fire hazard

Some airlines are doing away with in-flight duty-free goods sales, relying instead on last-minute duty free shops before departure, thus avoiding the need to carry surplus weight. A bottle of whisky multiplied a hundred times is a lot of surplus weight on any flight as well as a potential fire hazard in the view of many flight crews.

These improvements are welcome, but the most significant fuel savings in the airliners of the future will come from technological improvements in the engines. All the major engine manufacturers have been spending large sums and years of effort in attempts to reduce the fuel consumption of their powerplants substantially.

In its new Dash 535-E4 engine for the Boeing 757, for example, Rolls-Royce says that improvements in the engine will cut the fuel consumption compared with the earlier version of the same engine by 10 per cent. The improvements include a new super-efficient fan which produces most of the engine's thrust. It has fewer but wider blades than fans on current engines, producing power more

efficiently and allowing the maximum thrust to be increased.

Another development is a new exhaust nozzle which enables all the hot gases from the engine to be expelled through one nozzle, providing savings of up to 1½ per cent in fuel consumption while cruising.

Other improvements in the 535 engine include high-efficiency compressors and turbines, new electronic engine controls, and the extensive use of advanced lightweight materials, including a new high-temperature titanium alloy for the high-pressure compressor, Kevlar for fan-blades, and carbon fibre composites and titanium sandwich for nacelle components.

Pratt and Whitney, in its JT9D-7R4 for the Boeing 767, and the PW-2037 for the Boeing 757, is using many new developments, including improved nickel alloy in turbine and compressor discs, and "single crystal" blades in the first-stage turbine of the engines.

"Single crystal" is a Pratt and Whitney patented technology which is the result of more than 15 years of research. Such blades consist of one "grain" of alloy, and are claimed to be much stronger than blades cast with conventional materials, while they have greater resistance to metal fatigue, oxidation and corrosion. They also require less cooling air, which improves their efficiency.

The new electronic engine controls to be used in the Rolls-Royce and Pratt and Whitney engines will enable more accurate power settings to be achieved by the flight crew, eliminating the need for frequent throttle movements and "trimming" of the engine, which are both fuel-consuming procedures associated with conventional engine control systems. These electronic systems are also more reliable, thereby helping to reduce flight delays.

While many of the improvements are to be found on the new jet engines, the scientists have not been ignoring the propeller. There are many in the aerospace industry who believe that because of the substantial fuel savings and less noise that can be achieved with new designs of propellers, turbo-prop airliners may be used much more in the future, in some cases even replacing jets.

In both the U.S. and Europe,

work is under way to produce a multi-bladed propeller, rather like a ship's screw, in place of today's conventional four-bladed propellers. Studies into both six-bladed and eight-bladed propellers, for example, have been conducted by British Aerospace, while others interested in this approach include Hamilton Standard Division of United Technologies of the U.S.

The objectives are to meet the increasingly stringent noise requirements laid down by governments for new airliners, while also increasing the overall aerodynamic efficiency of these propellers.

The results could be savings of up to 40 per cent in fuel consumption over existing propeller-driven airliners. At the British Aerospace Dynamics Group, studies have centred mainly on propellers with diameters of up to 14 feet for engines in the 2,500-3,000 horsepower range—the type of new propeller which could be used on any new version of the BAe 748 airliner.

Variations

One of the most significant new developments to be used on the latest airliners will be a cleaner, simpler flight deck for the pilot and crew. There are several variations on this theme, but in general they make much greater use of coloured cathode ray tube displays to present the crew with essential information, in place of the vast arrays of dials customarily found in airliner flight decks; and greater use of push-button selectors rather than old-style switches.

The overall effect will be to clean up the flight decks, making them more spacious and comfortable, and helping to reduce workloads.

This is of considerable significance in the light of the current argument over two or three-person flight deck crews. Many pilots' unions are pressing for three crew on safety grounds, while the airlines for economy reasons want two, arguing that the new jets are entirely safe with only two on the flight deck. This debate is far from over, but the manufacturers stress that their aircraft can be flown by either two or three.

The flight decks will also increasingly be equipped with what are broadly described as "fuel management systems." These are methods whereby

using an on-board computer into which can be fed detailed information about the aircraft's flight path (such as the positions of the radio beacons it must pass over), the most economical route is calculated, and the directions for it fed into the aircraft's automatic flight control system.

As a result, the aircraft will virtually fly itself to its destination, with the pilot acting as a monitor, saving time and fuel. British Airways, for example, has been using this system on its long-range Lockheed TriStars for some years, with substantial savings in fuel.

Various aerodynamic improvements to the shape of new airliners are also being explored. Among new technical developments being tried by McDonnell Douglas is the use of "winglets" on the tips of the wings of a DC-8 jet, to improve their aerodynamic efficiency,

reduce drag and so cut fuel bills.

A new light-weight vertical fin made of graphite composite materials reduces the fin weight by as much as 20 per cent compared with aluminium fins. A DC-10 jet fitted with such a fin could save up to 3,500 gallons of fuel a year in normal service.

Other aerodynamic improvements will be less readily apparent. In more than 30,000 hours of wind-tunnel testing since 1970, Boeing aerodynamicists have refined a new cross-section for subsonic airliner wings—slightly flatter on the lower surface and thicker through the centre, thereby changing the airflow over the wings and giving a better distribution of lift.

The effects are not only to reduce "drag" and improve the flying performance of the wing (helping to save fuel) but also

to increase its strength. The improvements in fuel consumption come from lower engine power requirements, which in turn means less noise, especially on take-off and approach to landing.

These new wings also have greater spans, enabling slower landing speeds to be obtained, thereby improving safety. The new wings are being incorporated in both the new Boeing 767 and 757.

These two airliners will also be built with a much greater proportion of new materials, such as advanced composites made from graphite or Kevlar (a Dupont product) fibres, instead of using aluminium or fibreglass. Lighter and stronger than either of the two more conventional materials, the advanced composites will help to cut fuel consumption by amounts averaging 25 per cent in the weight of each component.



The advanced-technology Forward Facing Crew Cockpit on the A-310 Airbus features the use of cathode ray tube displays to provide much of the information normally shown by dials, together with more comfortable accommodation for the two-man flight crew.

High sales of commuter aircraft

CONTINUED FROM PREVIOUS PAGE

and others are in Scandinavia, South America, South-East Asia and Australia.

The maiden flight of the prototype is scheduled for August 1984. The production schedule calls for first deliveries in 1985.

Also aimed at the commuter airliner market are three other European types. The prototype of the Short Brothers Model 560 35-seat twin-turbo-prop airliner is already flying, and is scheduled for Certification and delivery to first customers this autumn, well ahead of any rivals, such as the Embraer Brasilia, the de Havilland Canada Dash Eight, and the Saab-Fairchild 340.

So far, 15 regional airlines throughout the world have placed orders for over 100 of the 360s, or are in negotiation with Short Brothers.

Short Brothers is also continuing to build the smaller 30-seat Model 330, for which orders have already passed 100, worth more than \$250m (over £130m) including spares.

To compete in the same field, British Aerospace is now studying an improved version of its BAe twin-engined 748 turbo-prop airliner, which in earlier



The Short 360 "commuter airliner" is already winning orders in the highly-competitive U.S. market and the company expects to sell several hundred aircraft in the years immediately ahead.

versions has already won orders for over 350 aircraft world-wide.

British Aerospace is also offering a smaller type in this overall market—the 19-seat Jetstream 31, the prototype of which is already flying. This is also a twin-engined turbo-prop, for short distances, which can also be used as an executive aircraft and as a military trainer.

Production of a first batch of ten aircraft has begun, and first deliveries are due at the end of this year. Ten aircraft have so far been ordered or optioned, with letters of intent for six more.

Sub-assembly production of a second batch of ten Jetstream 31s is under way, and manufacturing plans for the third batch are being prepared. A production rate of 25 aircraft a year

is planned from 1984 onwards. Although more a regional airliner than a "commuter," the British Aerospace four-engined 100-seat 146 is also competing in the latter market. The prototype is now flying, and Certification is set for later this summer, with deliveries starting in the autumn.

There are already orders for 13 aircraft with options on 12 more, and further contracts are in negotiation. The aircraft is being built in two versions, the Series 100 seating up to 80 passengers and the Series 200 seating up to about 100.

Outside the U.S. and Western Europe, the major commuter airliner manufacturers are de Havilland Aircraft of Canada, and Embraer of Brazil.

De Havilland Canada, of Downsview, Ontario, has for many years specialised in short take-off and landing (STOL) types of aircraft, including the highly-successful Twin Otter, of which well over 700 have been sold, and which continues in production.

DHC is now also well into quantity production of its 50-seat four-engined Dash Seven quiet short-take off and landing airliner, of which well over 100 have been ordered.

In addition, the company is developing the smaller 32-36 seat

Dash Eight, a twin-engined airliner which will complement the Dash Seven in the expanding market for commuter-type aircraft. With orders well over the 100 mark for the Dash Eight, production of the aircraft is on schedule for roll-out and first flight in mid-1983. Deliveries will begin in 1984.

In the longer-term, DHC is considering derivatives of both the Twin Otter, and a 60-seat development of the Dash Seven for service in the mid to late 1980s.

Embraer of Brazil has developed rapidly over the past decade to become one of the world's major producers of light transport aircraft. Its most successful so far has been the Bandeirante (Pioneer), a 19-seat twin-turbo-prop airliner, of which more than 350 have been sold, and which continues in quantity production.

Beyond the Bandeirante, the new 30-seat EMB-120 Brasilia twin-turbo-prop airliner is now under development, for a maiden flight in mid-1983, and deliveries in 1984. Orders and options for the Brasilia stand at over 150 aircraft, and it seems likely to remain a popular commuter type of aircraft for many years to come, despite the fierce competition world-wide.

Why Rolls-Royce flies ahead of the competition

When Boeing launched its new 757 airliner, the first customers chose Rolls-Royce engines. Why? Because the RB211-535 engine was the best offer. Already approved for airline service it is two years ahead of the nearest competitor.

Thanks mainly to its Rolls-Royce engines, the Boeing 757 will use up to 45% less fuel per passenger than today's 727s. The 535 combines the latest engine technology with features proved in many years of airline service in Lockheed TriStars and Boeing 747s.

Superb today, the 535 will be even better tomorrow. It benefits from the advanced engineering which keeps Rolls-Royce ahead. Powering commercial and military aircraft worldwide.

STAYING AHEAD IN THE RACE TO TOMORROW



THE ARTS

Festival Hall

Gilels

by DAVID MURRAY

Emil Gilels' all-Beethoven recital on Sunday afternoon was the sort that bobbles the... The first of three times in the programme, Gilels brought off an inspired performance of the Menuetto begun like a frail afterthought and yet rose easily to its tougher Trio.

Theatre Royal, Stratford, E.15

Variety Show

by ROSALIND CARNE

An exciting new Arts complex has opened in East London. The Bar Regatta at Stratford is all but complete, though regular punters may be assured that there have been no unsettling changes in their favourite theatrical watering hole.

'Ladbroke Lecture Concerts' live on BBC-2

A series of lecture concerts, sponsored by the Ladbroke Group, will enable thousands of young people to be introduced to classical music by such exponents as Claudio Abbado, Rudolf Serkin, Yehudi Menuhin and the London Symphony Orchestra.



"Figures and railings," mixed media sculpture by John Davies

Metropolitan Art Museum, Tokyo

Aspects of British art today

by WILLIAM PACKER

To travel to the other side of the world simply to see the art of one's own country may seem to be a conspicuously perverse exercise, and especially so when the goal is Japan, which has enough of her own that is strange and rare.

logical and industrial achievements that have followed upon her wholehearted post-war commitment to the West; but in cultural matters her case is somewhat more equivocal.

involved themselves fully in the processes of selection and preparation. The exhibition is thus the fruit of a true collaboration between the Japanese museum authorities and the officers of the Department of Art at the British Council.

at ease with the risks it takes. Its achievement is to represent British Art not fully, but at least characteristically, showing something of the range and variety of our artists' preoccupations, and a very great deal of its substantial accomplishment.

Round House

Maxwell Davies

by ANDREW CLEMENTS

Peter Maxwell Davies's two music-theatre pieces of the late 1960s, Vesali's Icones and Eight Songs for a Mad King, brought him more celebrity and (briefly) notoriety than anything else he has written to date.

Barbican Hall

Abbado and Ashkenazy

by MAX LOPP

We shall probably be tempted to "review" the Barbican concert hall, for some time to come, quite as much as the musical performances given there.

For its piano concerto at Sunday's concert (to be repeated during the coming week), Ashkenazy the London Symphony under Abbado had chosen Prokofiev's Fifth. It is a work in which from first note to last the piano asserts, sometimes in furious bursts of force; and it was unexpected to find the piano's assertion here somewhat diminished by the musing of solo instrument relative to orchestra.

Festival Hall

Tony Bennett

by ANTONY THORNCROFT

Tony Bennett may not be the most fashionable singer of the day but he packed the Festival Hall twice last weekend and pleased the audience with an act which need not have changed for over a generation.

congruously dedicated to Scotland, all those standards lost beneath the clean sweep of the youth-rock revolution of the late 1960s were back on parade.

better than I remembered and the casual, almost conversational style has great charm. For the first half Bennett was backed by the Ralph Sharon trio and you could imagine that in a smoky night club the impact would have been considerable.

—the little bow in anticipation of applause at the recognition of each song; the honeyed words — but by the end, after an attractive Duke Ellington medley which suggested that Bennett is much more of a jazz man than an awful "I left my heart in San Francisco" schmaltzer, and some very gracious treatment of the fans, Bennett's voice and greater strain, but the flow of memories was unabated.

THEATRES

ALBERT HALL, 333 3875. Credit cards 378. Seasoned by the Ladbroke Group, will enable thousands of young people to be introduced to classical music by such exponents as Claudio Abbado, Rudolf Serkin, Yehudi Menuhin and the London Symphony Orchestra.

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F.T. CROSSWORD PUZZLE No. 4817. ACROSS: 1 Criticise star performer with a remedy for everything (7). 5 A citizen to make liable (7). 8 Keep a tractor (5). 10 Ancient British chief needs a bird in tranvestite clothing (9). 11 Rendered drunk (9). 12 One who runs away to mock (5). 13 Terriers and family and a goat-like animal (5). 15 Inventive habit caught in the act of summing up (8). 18 Domestic pets constantly quarrelling (3-3-3). 19 Doctor a single idle fellow (5). 21 Scratch a bot dish (5). 22 A letter of reference (9). 23 Do I meet or make a latent shooting-star (9). 26 A safe bag (5). 27 A number of players take note about the net (7). 28 Flower in golden vessel (7). DOWN: 1 Remove the stone from a small lump with palpitation (7). 2 Fresh place of sale for game (8). 3 Weight of article in vehicle (5). 4 A morning getting through the contents of a beach & this is it (9). 5 Synonym on Ordnance B.50 map (8). 6 Impudent without a yashmak (7). 7 Keen we hear, but a bore (5). 8 Shoot right in the sinew (7). 14 Animal for grandmother to attack vigorously... (5-4). 16... and savage self-concern for animal cannibalism (3-3-3). 17 Is sought a source of interference in a state of equilibrium? (9). 18 A top accountant with copper and soldiers (7). 20 Item of jewellery for a receiver to reduce in price (7). 22 A game with which soldiers beat (5). 23 Near to a hundred feet tall with (5). 24 Horrify a soft friend (5).

FINANCIAL TIMES

BRACKEN HOUSE, CANNON STREET, LONDON EC4A 4BY
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Tuesday March 9 1982

WRESTLING WITH RECESSION—2

'Hacking' a path to recovery

Questions on Trident

MR JOHN NOTT, the Defence Secretary, says that the critics of the renewal of Britain's independent nuclear deterrent are gaining ground because the Government has not recently joined in the argument. The Government will come into the open shortly when it announces its chosen successor to Polaris—almost certainly the Trident D5, the submarine-launched missile already selected for the U.S. by President Reagan.

Perspective

All that is about par for the course. In the past, British administrations have reached their decisions on nuclear weapons policy within a tiny group of ministers and officials, and then defended them more or less successfully in public. Yet a decision to replace Polaris with a more devastating system designed to last through the first decades of the next century is rather more momentous than simply prolonging the life of the system we have. It deserves wider discussion, before rather than after the event.

One factor worth considering is the historical perspective. When Britain first began to develop atomic weapons, she was still a great power, albeit beset by turmoil in Europe. The Americans, of course, soon caught up and surpassed her. But there was then another factor which helped keep Britain in the nuclear league. The two countries had developed the weapons together and between them had won the war. It thus seemed a natural part of the special relationship that the U.S. should enable Britain to remain an atomic power more easily and more cheaply than would have been possible by our own efforts.

German labour true to form

A GREAT deal of huffing and puffing on the West German industrial relations scene has come to a surprisingly meek end. The unions are living up to their tradition of moderation. They are also putting jobs ahead of wage increases—hardly surprisingly if one considers that the seasonally adjusted unemployment figures have risen from 1.4m in September 1981 to 1.6m this January.

Undermined

The agreement must come as a tremendous relief to the Social Democratic-Free Democratic coalition Government of Herr Helmut Schmidt. It has had little to crow about of late. Divisions within the coalition were made starkly evident during a protracted wrangle about a modest reflation programme, now adopted. Matters have been made worse by the uproar caused when it became known that the public prosecutor is investigating accusations—all of them staunchly denied and as yet unproven—that several ministers and high officials accepted donations for party funds in return for giving tax concessions to individual businesses.

These events undermined the reputation of West Germany as a country that is both efficient and well run. Against that background, the metalworkers' settlement is of more than passing significance. It appears to show that West Germany retains one of the main strengths that have for so long sustained its economy—the ability of labour and management to arrive at a consensus.

More immediately, the containment of labour costs will make it easier for the Bundesbank to reduce interest rates. The need to do so has been pressed for some time by Chancellor Schmidt. But the Bundesbank is its own master in these matters and has moved only cautiously.

occasions again when Britain will have to stand alone, it is hard to see why other countries should not use the same argument. There cannot be indefinitely one rule for Britain and another for (say) Argentina or Brazil.

Alliance

Yet it seems to us that in the British case the central question is rather different. It is: what is the value of the British deterrent to the Atlantic Alliance as a whole? The alliance has done more than anything else to preserve peace in Europe for the last three decades and the main objective of British foreign policy in future must be to cement the alliance. The fact is, however, that it has never been established how far our allies believe that the independent deterrent is the best contribution that Britain can make. That should be a matter for consultation, especially when economic constraints are limiting conventional defence. It may be time for a new division of labour—and of expenditure—within the alliance.

It is also odd that the British decision should be being taken in isolation from the French, the other European nuclear power. At the very least, there should be discussion between the major allies about what Europe wants for its defence in the year 2000.

Consent

The last point is that it is questionable whether Britain should announce a devastating new weapons system when President Reagan appears to be about to launch a new initiative on strategic arms control. In short, the case for the need to reach a decision on replacing Polaris now is not proven. The decision will be of fundamental importance for a generation: it needs to be based on a wider consent than the Government has secured so far.

port points out that the external current account has been improving steadily since the record deficit of DM 29.5bn (about \$5.9bn) in 1980, and says that there are justified hopes that current payments will be in balance this year.

Innovation

The improvement has been achieved largely through higher exports to the oil producing countries. For 1982, the Bundesbank also expects enhanced demand for German products from the industrialised countries of the West. Both points raise some questions. Recovery in the West is, as yet, only a hope. More important, the downward pressure on the world oil price may severely reduce Opec's appetite for German industrial equipment.

There also are doubts whether German industry has done enough to steel itself for the challenges of Japan and of industrial innovation. One of the secrets of the German industrial resurgence after the War was the purchase of foreign, mainly American, technology, which was applied with characteristic attention to detail both in design and marketing. That strategy will be difficult to repeat. Much will therefore depend on homemade innovation. In that area things do not look too well. German excursions into computer technology have not been especially successful; the nuclear industry is under a political cloud; and though there have been some successes in the development and application of robots, West Germany is not in the van of microchip technology.

Imaginative These weaknesses need not be fatal. But remedying them will require both an entrepreneurial leap forward and money which many highly geared enterprises may not easily raise. Business confidence is not especially strong at this time, though industrial investment has, in fact, held up quite well. The new reflation programme is intended to support it by offering investment premiums and by shifting more of the burden of taxation on to consumption.

SALES PER employee in Tootal's UK factories have gone up 30 per cent in the past year. Trading profit per employee has risen by around 60 per cent. Both improvements are a result of wide-ranging cutbacks introduced by the company.

Wiggles Teepe's output of adhesive and photographic papers has risen by about 13 per cent in terms of tonnes per man during 1981.

At GKN's Brymbo engineering steel works in North Wales the hours needed to produce a ton of finished steel have been reduced from 10 to 7.7 in two years by a £2m melting shop investment. The 2,200 labour force has been cut by 700 and labour flexibility has been vastly improved.

Virtually all the 15 companies included in the FT's Wrestling with Recession series 18 months ago have made such economies.

Most talk in terms of immediate productivity gains of 10 per cent or more. Labour and other costs have been cut by up to 15 to 20 per cent. At least three or four companies have cut so deeply that, quite independently of each other, they described what they had had to do as "hacking" through their organisations.

The 53,000 jobs that have been lost in these companies alone are a measure of this "hacking". And none of the companies expects to take much labour on for at least a year or two.

There are a few exceptions—Northern Engineering Industries, for example, is recruiting for nuclear plant work at Gateshead but says that otherwise "we only really expect small fluctuations around our current

levels." Mr John Young, managing director of Weir, which has turned itself round after its spectacular near-collapse a year ago, says of his pumps business: "We've got our labour requirement and the size of the workforce more or less in balance and when orders pick up though there's no sign of an upturn in the UK—we should get the productivity." The labour force in the pumps business has dropped from over 4,000 in 1979 to 3,300. Total group employees are down from 8,200 to 5,200.

Some of the companies—IMI, Tootal, Croda, Johnson and Firth Brown and Gestetner—are likely to declare more substantial redundancies this year, even though almost all the companies say that their major surgery is completed.

Despite the hopes that Ministers pile on small businesses for Britain's industrial revival, there is no sign that the two smallest and most successful of the 15 will take on any more than a handful of employees. Dale Electric's labour force is more or less constant at around 1,000 employees (the company is expanding more abroad than in the UK) and Digico's is around 200.

But Digico's does show how a high-technology company has managed to ride the recession with little apparent concern. Its top management is not even sure that it has been affected at all—though the company realises that it must have lost some orders. But it is an expanding business—making computers—and even companies strapped for investment cash have been spending a few thousand pounds on Digico's sort of products.

Each employee will work 25 hours a week and the factory will operate for 75 hours a week. This is expected to suit female workers (90 per cent of the 5,000 employed now are women). It will also mean that 1,200 more people could be employed, while saving the company meal break costs and other extras.

Although trade union agreements have not yet been gained, the cooperation of unions and shopfloor workers has been important in the other savings. People are not usually replaced when they leave—their jobs are taken by existing workers under general flexibility.

The only major cutback—which shed 1,700 jobs—has been the closure of a cake and frozen food factory at Osterley, West London. Cake production there was abandoned, but the frozen food business was integrated elsewhere at a cost of £10m, which the company says will be recouped in two years.

Shopfloor redundancies have totalled some 3,000 out of 14,000. Other savings have been made by rationalising distribution and other support activities.

As British industry waits to hear what help it will receive in today's Budget, John Elliott returns to the 15 companies profiled in the FT's 1980 series, Wrestling with Recession, to see what productivity gains they have made

Digico's growth has slowed from a forecast 50 per cent a year to about 30 per cent so its turnover of £2.6m in 1979 and £3.5m in 1980 is expected to hit £6m this year. Last March it raised £2.3m equity for investment from 30 City institutions through Fleming's, the merchant bankers, and it is now owned 60 per cent by outside interests and 40 per cent by the directors.

Having chosen its niche for expansion, Digico launched a £1,500-£4,500 micro-computer last August and has been amazed to receive 350 orders already. A Mark 2 version is now being launched and Digico is also moving successfully towards bridging the gap both between individual micro computers and between mini and main frame computers.

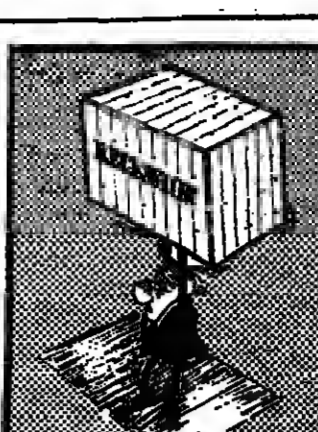
Another company happy with its record is Croda, which last week beat off a takeover bid from Burnham. Its chairman, Sir Freddie Wood, is now about to launch Croda on a second

cost-cutting and slimming-down exercise in order to meet pre-tax profits forecast of £16m to £20m issued for 1982 during the bid battle (1981 profits are expected to total £10m).

In the past two years, six gelatin and ink-making factories have been sold, £5m has been realised from sales of shareholdings in other companies and surplus property, and £10m has been cut out of working capital, mainly through a drive on stocks. These moves were in line with a policy decided by the Croda board in August 1980.

"Now we have launched Counter Attack 1982 to do the same thing again, looking at all our manning levels, capital expenditure and expenses," says Sir Freddie. The 5,000 UK labour force will be reduced, but not, it is expected, by as much as the 25 per cent cut in the past two years.

But the less optimistic side of what has been happening is evident in some of the cutbacks



circles which Wedgwood helped to pioneer in the UK. But Mr Peter Williams, Wedgwood's deputy chairman, has reservations about the impact of the recession. Not only does he believe that it has proved a "hard way to win a limited objective" but he also thinks that Wedgwood is not the sort of business that can obtain dramatic productivity improvements quickly.

He is also concerned about the impact of high interest rates. He says that Wedgwood's £2.4m bills for interest charges on working capital would have been £700,000 higher in the past two years if it had raised the finance in the UK instead of going to Japan and Germany.

But he argues it is "not sound policy" to finance capital expenditure in foreign currencies. The 15 to 16 per cent Wedgwood would have had to pay in the UK would have been twice as much as the company considered worth while for such expenditure. So capital investment has been cut in £1.5m-£2m from the £4.5m-£5m annual rate that the usual calculation of fixing capital investment at 1 1/2 times the rate of capital depreciation.

companies have had to make. Apprenticeships, for example, have been hit in companies like Jones and Shipman (see below) and in GKN, which has also had to sack a few apprentices when closing factories. Some managers hope, however, that changing technology and new training arrangements will eventually offset that loss.

Research and development has also been cut back a little in such companies as GKN and Weir while Gestetner, which says it needs to increase its expenditure considerably, would like the Government to provide more financial incentives.

Capital investment has also been cut in some companies as well as being switched abroad by businesses like GKN which started to change its international balance in the early 1970s.

The problems that cutting investment can create are graphically put by Mr George Hardie, finance director of Johnson and Firth Brown, which invested only in line with its rate of depreciation (£5.7m in 1981 instead of at 1 1/2 times that rate.

"That's all right for a year or two, after our previous heavy investment programme, but in a year or two more, if we can't find the funds for reinvestment, then we just get weakened and can't compete. Then one might have to drift out of things again," he says.

Johnson and Firth Brown also provides an example of how it can still be difficult to achieve productivity gains. It set out last year to reduce its major Firth Brown special steels subsidiary labour force of 4,350 by 1,400. It still has to achieve the last 250 redundancies and also wants to make

further savings of 17 per cent on payroll costs which the trade unions involved say would mean a further unacceptable cut of 500 jobs.

"Firth Brown is still not profitable or as productive as our international competitors and it is difficult to see how it can become so without further savings," says Mr Hardie. "If anything is to come of this recession we must be able to compete in international markets."

That point touches on the issue of how permanent the productivity savings really are. Some companies are already worried that labour relations have not been significantly transformed. "You'd have thought in the past two years that we would have cracked this 'fitter and his mate' syndrome but it's still sticking in some places," says a senior manager in the engineering industry.

The first question is whether gains that have been achieved will stick when the upturn comes. The second is whether the productivity improvements are just one-and-for-all gains or whether (as seems less likely) the habits and motivations of managers, workers and trade unions have been so significantly changed that Britain will be permanently better at seeking out new markets, introducing new products, at making cost-cutting savings, and at improving labour efficiency.

Only if there has been such a fundamental change will Britain's poor productivity record be permanently improved as a result of what several companies call the "traumas" of the past two years.

UNITED-BISCUIT

'People still have to eat, thank God'

UNITED BISCUITS has not been hit as hard as more traditional manufacturing companies. "People still have to eat in a recession, thank God," says Sir Hector Laing, the chairman.

But it has still chalked up a 10 per cent saving on the man-hours taken to produce a ton of biscuits during the past two years. Its biscuit company's labour costs have been cut by 12 to 15 per cent and the cost of materials used for packaging biscuits has been cut by about 5 per cent (£1.1m) in the past three years.

In 1950 it took 126 man-hours to produce a ton of basic biscuits. Today the figure is 23 man-hours but the target, with more automation, for 1984 is 10.

United Biscuits' food company is moving gradually towards a major change in working hours with the eventual use of employing only part-timers.

of potential customers of retailers, mail order buses and finance groups. A series of delays—on the electricity supply went on the blink—reduced Credit Data's share of a declining market as the recession hit consumer demand.

The receivers, appointed on behalf of the company's bankers, Barclays, have accepted, subject to contract, an offer from United Association for the Protection of Trade for CD's reference agency business.

If the deal goes through, the non-profit going UAPT, with more than 16m files on its central register at Skelmersdale in Lancashire, will have a virtual monopoly in its field.

Whatever money the receivers may get from UAPT, they say, it is however, unlikely to be enough for any payment in he made to shareholders.

WEDGWOOD

The tea cup proof of productivity

WEDGWOOD'S shopfloor labour force in the UK has been reduced by 25 per cent over the past two years from 7,000 to 5,250.

But days worked are down by 30 per cent because of short-time working.

Direct labour costs now account for 25 per cent instead of 27 per cent of the total cost of making, for example, a tea cup.

In addition, staff has gone down by 18 per cent from 2,600 to 1,300. Overall overheads have been cut by 19 per cent.

Four factories have been closed and their work concentrated in the remaining 15. Generally the factories are now working at only 70 per cent of full capacity compared with a peak approaching 90 per cent from 1977 to 1979. An improvement up to 75-80 per cent is hoped for in 1982-83.

Further productivity improvements are being sought through work study schemes and greater use of quality

JONES AND SHIPMAN

Four-day week for a year

JONES AND SHIPMAN, machine tool manufacturers of Leicester, reduced its workforce from 1,550 to 1,150 in 1981 at a net cost to the company of £600,000. That will save it £2.4m in wages a year. But it is not regarded as a good bargain by a company whose UK order intake has dropped by 50 per cent.

The workforce has been on a four-day week for a year and may well not get back to normal working before the autumn.

At the start of the recession, the company survived on its strong order book, but then decided to build for stock to keep its skilled labour force together (like Dale Electric profiled yesterday). It built up a £2m stock of machines which are now scattered in markets around the world waiting for buyers.

Profit margins have been dramatically reduced. Pre-tax margins have fallen from 15

Men & Matters

Credit Data in the red

Though its shareholders are unlikely to see the joke, news that Credit Data, the country's second largest credit reference agency, has itself run out of credit has been greeted with a certain amount of ribaldry.

The receivers have been called in to the Manchester-based company, founded by solicitor Paul Brooks some 10 years ago. Financial problems have haunted the company since Brooks paid £1 to take over the older and larger British Debt Services agency, together with its debts of nearly £2m, in 1976.

The company's Stock Exchange listing was suspended the same year and, despite a short-lived return to profitability, another £1m was lost between 1978-80.

After a "speculative" rights issue of £1.26m considerable hope as well as £2m was invested in a new computer system in which to store its 10m files on the credit ratings

road which had probably never seen so many customers before. The Scottish national flag drooped from the door and inside, trinkets and plaid scarves were also on sale.

Conservative Gerry Malone thoughtfully gave the breathless pack a chance to reorganise afterwards, waiting until the evening to enter the fray from a Victorian house near the university.

Ever since the death of Napoleon III, the administration has occupied the north wing of the Louvre. Now the 3,000 civil servants are being shifted to the unfashionable 12th arrondissement behind the Gare de Lyon. And the 40,000 square metres of palatial anterooms they occupy are to become part of the museum.

The two ministers who have offices there, Jacques Delors (Finance) and Laurent Fabius (Budget) wanted to move to the Quai Branly in the shadow of the Eiffel Tower where some temporary buildings could have been turned into a more imposing edifice. That would have kept them within easy reach of the other main centres of power.

Most top civil servants would have preferred alternative sites nearer the smart residential areas in the west of Paris. But they did not get their way.

The final decision to move the department further up the Seine in a bid to upgrade a part of the capital snubbed until now by government and big business, reflects an unusual entente cordiale between Mitterrand and his most powerful political enemy, the neo-

Top gear

Not least of the headaches for the U.S. motor industry is that all the new "downdized" (smaller) cars it is rushing to produce are bringing with them a whole range of new components for dealers to stock.

The current estimate is that within five years there will be at least 20,000 more, or an increase of around 20 per cent for the automotive aftermarket to handle. And once they have been introduced, they simply don't go away.

Richard Teasel, vice-president of research and development for Champion Spark Plug Company, emphasises this point rather neatly. "The unfortunate fact is," he says, "that once a new part is introduced, it may be in the parts line literally for ever. For example, the Model 'T' Ford has not been made since May 1927, yet last year we made and sold 17,469 spark plugs for these vehicles throughout the world."

Spare part

From the hard-pressed U.S. motor industry, too, comes this story of a Chrysler-Plymouth dealer in the Mid-West who hadn't made a sale for a week.

In desperation, and being a religious sort of man, he threw himself onto his knees in the dust outside his showroom and raised his hands to the sky to plead: "Oh God, if you have any feeling at all for me, please, please make me a Japanese car dealer."

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Observer

THE KREMLIN SUCCESSION

The KGB puts down a marker

By David Satter in Moscow

HISTORIC changes are sometimes ushered in by chance events but no bit player ever seemed less likely to stumble on to the stage of history than Mr Boris Buryatia, a singer in the choir of the Bolshoi Theatre and the reputed lover of Mrs Galina Churbanov, the daughter of Mr Leonid Brezhnev, the Soviet President.

Mr Buryatia was arrested on January 29 after diamonds worth a major diamond theft were found in his possession. But the outcome of his individual case pales in significance compared to what his arrest appears to represent: a direct and unprecedented challenge to the Brezhnev leadership by the KGB.



KONSTANTIN CHERENKO no personal base of authority



LEONID BREZHNEV hold may have been strengthened

Pyotr Shelest, the former Ukrainian party leader, was the demotion believed to have stemmed from a difference over policy. Mr Shelest was said to have opposed the visit of U.S. President Richard Nixon to Moscow in 1972, following the mining of Haiphong Harbour.

personal base of authority but owes his career entirely to the patronage of Mr Brezhnev. The two men met in the early 1950s when Mr Brezhnev was the party boss in Moldavia and Mr Chernenko was in charge of propaganda in the republic. Mr Chernenko's career has progressed with Mr Brezhnev's ever since.

chvious choice of the party apparatus to succeed Mr Brezhnev. Editors of newspapers and journals and other officials in the ideological sphere have been told in refer all questions which require authorisation from the Politburo to Mr Chernenko, a sign that he is likely to be confirmed as the Soviet Union's new chief ideologue at the next Central Committee plenum this month.

Mr Arvid Felsche, at 53, is considered too old to succeed Mr Brezhnev and Mr Rumanov, the Leningrad leader, although a possibility, is felt to be handicapped because his power base lies outside of Moscow. Mr Andrei Gromyko, the Foreign Minister, is probably too valuable as a specialist in foreign affairs. This leaves four plausible alternatives to Mr Chernenko — Mr Kirilenko, Mr Viktor Grishin, the head of the Moscow party organisation, Mr Dmitri Ustinov, the Defence Minister, and Mr Yuri Andropov, the head of the KGB.

Lombard Britain's tactics in the EEC

By John Wyles in Brussels

THE OUTCOME of President Mitterrand's recent visit to Rome raises some interesting questions, if not doubts, about the British Government's tactics on the EEC budget issue. President Mitterrand's Government, it should be recalled, has done its best to poison relations with Rome by stirring out imports of cheap Italian wine.

But it is just possible that the British may be taking too much for granted this time. Among other things it should be remembered that they are dealing with a different French President who, as Socialist Party leader, bitterly criticised his predecessor for making the 1980 agreement. Suppose that this French government will not give Mrs Thatcher satisfaction, suppose it tries to force through a farm price increase on a majority vote, suppose even that it resorts to national measures to give its farmers a price increase?

Confident

Meanwhile, what has British diplomacy been doing? Lord Carrington gave a speech in Hamburg recently talking of the need for "patience, tolerance and restraint" and Mrs Thatcher is likely to have one of her two bilateral annual meetings with Chancellor Schmidt before the EEC summit on March 29-30.

An idea

Yet last spring the British floated an idea which could have mobilised several others, led by Italy, and which might have put a different complexion on the budget negotiations. The idea was to aim for a more genuinely redistributive EEC budget which would transfer wealth from richer to poorer member states.

Letters to the Editor

Trade unions and the amendment on legal immunity

From the Director General Engineering Employers' Federation Sir,—You report (March 4) that a number of employer organisations support a back-bench amendment to the Employment Bill which would withdraw legal immunity from unions which did not exhaust the agreed dispute procedures before taking strike action.

breached) into less formal and more convenient ways of handling the business of bargaining. Such agreements would not easily bear the weight of legal inquiry as to whether in a particular case one side of the bargaining table or the other had been in breach of procedure or whether a breach of procedure at some point by one party had been condoned by the other.

You also report that Mr Tebbitt does not seem attracted to the concept of withdrawing legal immunity from unions which do not exhaust the agreed dispute procedure before taking strike action; and I believe that in this he will be supported by the majority of employers who are actually involved in bargaining. Reform of British industrial relations needs to concentrate on reducing the frequency and severity of strikes.

Massive devaluation required

From Messrs A. Mitchell MP, B. Gould, J. Mills and S. Stewart Sir,—In the year ended in the first quarter of 1973 manufacturing output rose 13 per cent, input per person 15 per cent and output per operative hour 11 per cent. The increase of 7 per cent in output per person hour in the past year could well be accounted for solely by the effect of closures on the average; and the price this time has been rising unemployment, higher taxation, would have a broad enough base to make a bid for power a plausible possibility. Only a handful of the existing Politburo members, however, are believed to stand any real

The Press in Nicaragua

From the Nicaraguan Ambassador Sir,—I refer to the report titled "Nicaraguan newspaper becomes thorn in Sandinistas' side" (February 24). Two years ago the chief editor and 80 per cent of the staff left the offices of La Prensa to form a new journal called "Nuevo Diario" in which the journalistic spirit of Dr Chamorro is carried on. La Prensa as it now stands is nothing more than an instrument at the service of those who for a variety of reasons are trying to label the Nicaraguan revolution, perhaps looking for some way to dispose of it, by calling it a copy of the Cuban revolution and in this way they are being subservient to outside power and internal manipulation.

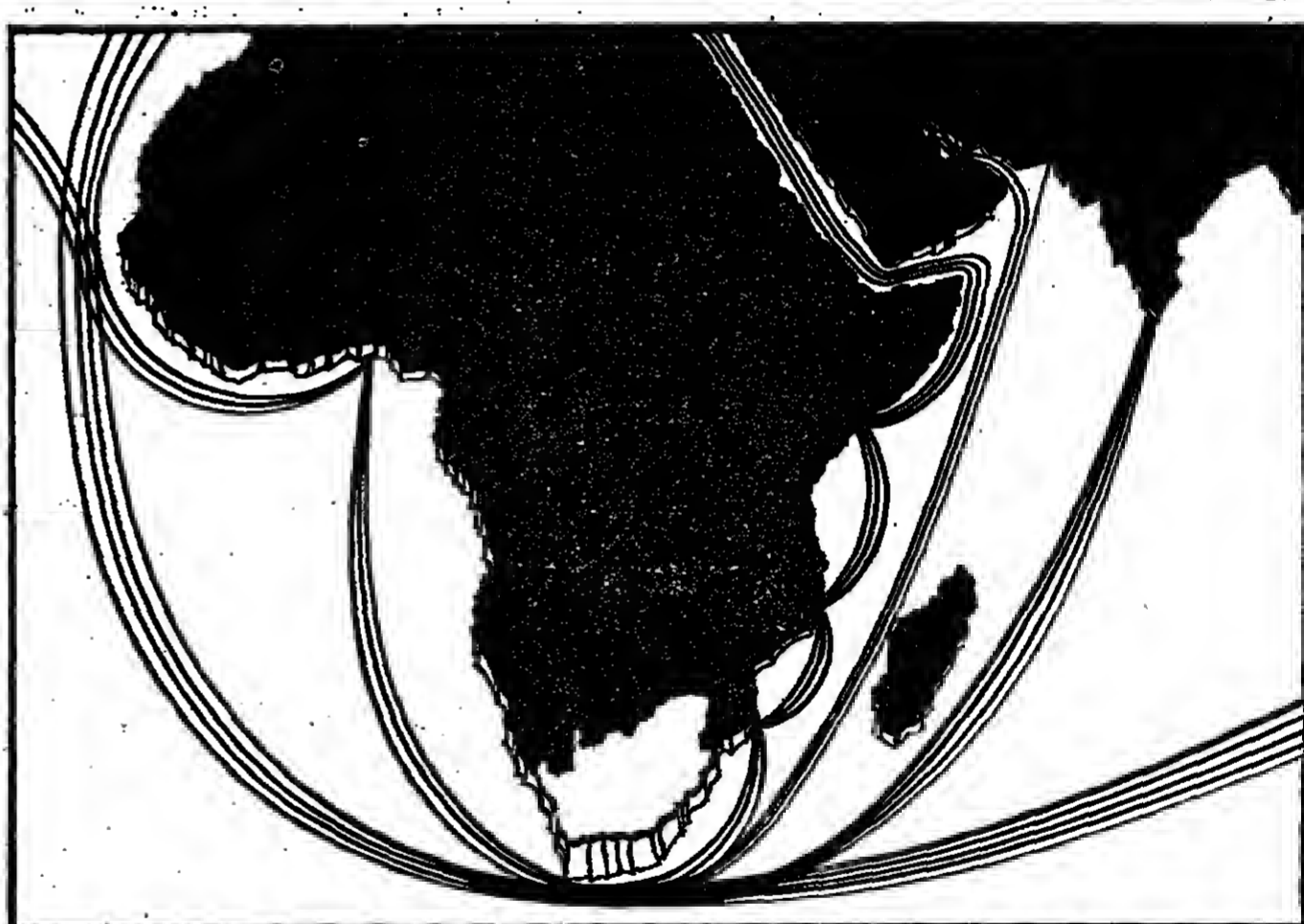
Europe's pulp prices

From the Director General, British Paper and Board Industry Federation Sir,—I read with great interest the article (February 18) concerning movements in the price of wood pulp for paper-making. I thought you might like two supplementary comments in relation to the UK market as opposed to the European market in general. It is not strictly correct to say, as far as the UK is concerned, that the pulp price has fallen. Although list prices of bleached long-fibre pulp may have risen at the end of 1981, the general view is that buyers anticipated what has now happened and did not actually purchase at the higher figure. It would therefore be more accurate to say that a projected price rise has not actually been applied. Much more importantly, the

Going beyond Glasgow

From Mr K Cox Sir,—Glasgow may not be the end of the road (Samuel Brittan, Lombard, March 1) as motorway links now make it possible to reach Inverness (via Striling). Further north will be possible when the Kessock bridge is completed. The financial institutions in Glasgow will consider it an honour to explain to southern pundits the other routes around the country, not necessarily covered by the Automobile Association, or the Treasury. Kenneth Cox, 19, Clapham Road, Dumbarton.

sterling price of pulp did rise last year very sharply and remains today at prices never seen before—purely because of the exchange rate variation from \$2.30-\$2.40 to the pound in 1980 to \$1.75-\$1.90 in 1981-1982. Since wood pulp is sold in dollars, this fall in sterling value against the dollar increased the sterling price of bleached northern softwood pulp from approximately £285 per tonne to nearly £300. J. H. Adams, The British Paper and Board Industry Federation, 3, Plough Place, Fetter Lane, EC4.



IF YOU WANTED TO CONTROL THE WEST'S SUPPLY LINES, WHERE WOULD YOU HAVE TO WIN CONTROL FIRST?

You don't need a diploma in military strategy to put two-and-two together. Each month about 2,300 ships pass South Africa's coast, most en route for the West. They carry 80% of NATO countries' oil supplies and 70% of their strategic minerals. Indeed, the Republic of South Africa itself is the only stable country outside the Communist Bloc with large reserves of chrome, platinum, manganese and vanadium. Without reliable supplies the West could not manufacture computers, machine

tools, aero engines, gearboxes, TVs, drilling bits and defensive armaments. No wonder South Africa has been called the 'Persian Gulf of strategic minerals'. So you can see how the stability of the West and the stability of South Africa are linked. Yet the mandatory arms embargo placed on the Republic by the U.N. means South Africa is unable to patrol the strategically important sea lanes around the Cape. On the other hand, the build up of the Soviet naval presence in the Indian Ocean is not hindered by such embargoes.

South Africa Further information can be obtained from The Director of Information, South African Embassy, South Africa House, London WC2N 6DE

Companies and Markets

UK COMPANY NEWS

BTR ahead to £90m with boost from overseas side

BOLSTERED BY overseas operations and achieved on a 25 per cent sales rise, taxable profits of BTR, the energy, engineering, materials handling, plastics and rubber group, improved 28 per cent from £70.3m to £90.1m in 1981.

Tax took £27m (£3.1m) and minority profits a further £8m (£4m), which left stated earnings per 25p share some 21 per cent better at £23.9p (19.7p) adjusted for last year's scrip and rights issues. From these the final dividend is 4.5p net, effectively lifting the final payment by around 22 per cent from 7.16p to 8.7p on the increased capital.

In reviewing these results, the directors say that international operations produced a higher contribution but there was a further decline in UK profits.

This fall amounted to around £4m, after taking out additional contributions from Huxley Corporation and Serck. However, while the directors recognise that the situation in the UK remains difficult, they emphasise that the reduction to profits from that source would have been greater without the action taken on factory closures and reorganisation during the year.

Out of a total increase of £24.4m, which gave operating profits of £27.4m, organic growth for £5.5m after allowing for the UK downturn, acquisitions realised a £9.7m advance, inflation accounted for £8.2m and favourable exchange fluctuations amounted to £5m.

A rise in other income added a further £8.3m (£4.2m) to pre-tax profits, but finance costs absorbed £13.6m compared to £5.8m. Below the line there were extraordinary debits this time of £1.1m against

Table with 5 columns: Company Name, Current payment, Date of speeding for year, Total last year, Total last year. Rows include AAH, Allied Intl, British Vils, etc.

credits of £1.2m and on a CCA basis, profits before tax totalled £81m (£61.5m). An analysis of historic sales, £637.5m (£509.5m), and operating (£310m) and £37.7m (£39.2m). Western regions (£20.2m (£17.1m) and £29.5m (£16.3m) and Eastern region (£163.7m (£122.7m) and £25.2m (£17.6m)). Exchange fluctuations on turnover were £24.3m (nil).

Apart from the UK, other European operations enjoyed increased sales and profits, the directors report. The 82 per cent improvement in Western region profits was spread broadly across all operations, they say.

Shareholders' interests at the year-end showed a £38.1m improvement to £260.6m, while capital expenditure during the 12 months amounted to £75m, including £43m on acquisitions.

The most notable of these was Serck, results of which have been consolidated for the three months of the year in which they applied, while a report on the acquisition is awaited from the Monopolies and Mergers Commission.

Borrowings at the end of 1981 accounted for 59 per cent of funds employed, and net interest charges were covered 7.6 times by available profits.

The directors note that early in the current year the world's economic climate appears less bright than for some time. Nevertheless, they emphasise that the uncertainties in the year ahead will be faced with the same attitude that has brought the group a long-term record of consistently better than average results.

Caught off balance by the recession while expanding, rapidly Greenfields Leisure has

been reversed and that profits will be earned. It is also hoped that results for the current and future years will justify a return to dividends approaching former levels.

For the 12 months under review, pre-tax losses totalled £1.7m, compared with a mid-term deficit of £652,000 and a profit of £14,000 for the last full year.

Invergordon down but payout held

TURNOVER and profits of Invergordon Distillers (Holdings) were both down for 1981 but the dividend is maintained at 4p net per 25p share with a same-again final of 2.5p.

Following a fall at midway from £21.1m to £18.5m, taxable profits finished the December 31 year behind at £3.81m, compared with £4.37m. Turnover declined by £3.86m to £20.78m.

Last September, in their interim statement, the directors said that if the poor trading conditions persisted, they expected little improvement in the rate of profit for the rest of the year.

Profit for 1981 was after interest charges of £1.05m, compared with £1.14m, and subject to tax of £499,000 (£435,000). Earnings per share are given as 16.96p (20.17p) and the amount retained came through at £2.55m, against £2.15m.

On a 2 current cost basis, the pre-tax figure is reduced to £2.56m (£2.77m).

The main whisky glut continues, and Invergordon is having to re-strict production of Blighs even more than last year, when all four malt distilleries were shut for several months. There will be no real recovery until the blenders get their stocks into balance with lower forecast demand—which they cannot do quickly—but the turnaround in grain spirit might be expected to come sooner, perhaps next year.

Meanwhile, Invergordon has been able to rely increasingly on its own blended sales (largely export) and on distillation of neutral grain spirit, used for gin and vodka. The second half was a slight improvement on the first. Higher exports outweighing shippages at home.

At 198p the shares stand on an historic multiple of 16.5 times fully-taxed earnings and yield a mere 3.6 per cent. This represents an exacting valuation; Highland, which has a strong branded side in addition to its fillings, yields a point more.

There is always speculation that Hawker Siddeley might decide to sell the 76 per cent stake which it controls through Carlton—whisky does seem a bit incongruous in that context—but Hawker is unlikely to bale out at this stage of the cycle.

Reduced demand leads to lower results at AAH

A DOWNTURN in demand is reflected by reduced pre-tax profits at AAH Holdings for the nine months to December 31, 1981, says Mr W. Pybus, chairman.

The taxable surplus slipped from £8.48m to £5.54m on turnover £39.56m higher at £390.65m.

"We are naturally disappointed," says Mr Pybus "that after 14 years of reporting steadily increasing profits, before taxation, we have on this occasion to report a reduction of approximately 14.7 per cent."

Mr Pybus says that the reduction reflects the downturn of demand and consequent contraction of margins which have been heavily affected all the group's activities, with the notable exception of solid fuel, which contributed trading profits of £4m.

"However," he says, "we have succeeded in retaining our share of these highly competitive markets. The quality and basic strength of our businesses ensures their ability to take advantage of any upturn in the economy."

The interim dividend has been effectively raised from 1.9115p to 2.1p. Earnings per 25p ordinary share are given as 1.9p lower at 8.2p. In the last full year pre-tax profits stood at

£9.68m on turnover of £360.27m. In the nine months, says Mr Pybus, the group has disposed of, or closed, five businesses which were either outside the main stream of group activities or making an inadequate return on capital.

"On the other hand," he says, "we have continued as in the past, to expand vigorously in the fields in which we are knowledgeable."

A breakdown of turnover and trading profits by division shows: solid fuel £160.94m (£140.46m), £4m (£3.66m); oil £42.83m (£32.42m), £503,000 (£704,000); builders' supplies £31.74m (£30.26m), £288,000 (£279,000); pharmaceutical supplies £39.55m (£34.78m), £372,000 (£1,311); engineering £5.97m (£8.46m), £50,000 (£294,000); agricultural supplies and services £3.34m (£2.33m), £289,000 (£279,000); road haulage £9.44m (£7.75m), £482,000 (£527,000); miscellaneous £6.84m (£4.65m), loss £308,000 (loss £35,000).

After interest charges were reduced from £1.73m to £1.31m. The charge for tax was lower at £1.75m (£2.11m).

After minority debits of £1.34m (£1.41m), and preference dividends of £56,000 (same), attributable profits emerged slightly lower at £2.38m (£2.51m).

Sugar's borrowings had fallen (to £31.5m) during 1980/1.

Sir Gerald went on to accuse Berisford of "mediocre performance" and of "limited knowledge of capital intensive manufacturing industry."

In Berisford's 1981 accounts, the chairman, Mr Ephraim Margulies, said that "the results achieved by British Sugar fully justified the investment we made last year."

In its last accounts British Sugar set aside £1,215,000 for "bid defence."

At the British Sugar annual meeting in January, Sir Gerald said that British Sugar had several meetings with Berisford since July 1981, and that he expected Berisford to make a further bid for British Sugar in July or 'some time after that'.

The engineering companies moved from the losses of last year to a modest profit, says Mr Galliford. The contracting companies performed well considering the increased pressure on margins.

The Chorley division made a good recovery, adds Mr Galliford, and the purchase of a 50 per cent interest at the end of the period in a Singapore-based company will provide a vehicle to exploit the division's expertise in that part of the world.

Scholes maintains recovery

IN THE first half to December 31 1981, George H. Scholes, electrical engineer and manufacturer of Wylex electrical products, maintained the recovery made in the second half of last year with taxable profits of £1.77m compared with £390,000. Turnover for the period rose from £6.72m to £8.06m.

With earnings per 25p share stepped up from 4p to 6p net, last year a total of 16.52p was paid from taxable profits of £1.79m (£2.48m).

The pre-tax profits included interest on short term deposits of £31,000—last time there were interest charges of £25,000—and tax took £523,000 (£177,000).

Dividends absorbed £237,900 (£171,000) leaving retained profits of £682,000 (£242,000).

The directors say that in the second half so far demand for the company's products has been well sustained, although operational costs have inevitably been influenced by exceptional weather conditions.

Last October the directors explained that in view of the seasonal nature of the trade, they were not giving any profit forecast, but said that first quarter trading compared favourably with the same period in 1980.

After six months tax of £127,000 (£111,000) earnings per share are given as 9.5p against 3p, and there is no interim dividend. In the preference shares under rule 163 (2) may be submitted.

SHEFFIELD TWIST The listing of the 5 per cent preference and 7 1/2 per cent debenture stock of Sheffield Twist Drill has been cancelled. Application to make specific holdings in the preference shares under rule 163 (2) may be submitted.

Sheldon Jones up at midway

FOR THE half year, ended November 30 1981, Sheldon Jones, annual general manager of the United Securities Market last October, increased its taxable surplus from turnover of £5.99m against £3.18m.

The directors say that in the second half so far demand for the company's products has been well sustained, although operational costs have inevitably been influenced by exceptional weather conditions.

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British Sugar chief criticises Berisford's financial position

Sir Gerald Thorley, chairman of British Sugar Corporation, criticised the performance and financial position of S. and W. Berisford, in a letter to shareholders yesterday.

Berisford holds a 40.02 per cent stake in British Sugar's equity.

Sir Gerald points out that Berisford's reported 13 per cent rise to pre-tax profits to £40.8m in the year to November 1981 was "mainly due" to its treating

British Sugar as an associated company.

At the trading level, excluding British Sugar, Berisford's 1981 profits were down £800,000 to £47m.

Gerald also argues that British Sugar's dividends and earnings per share have increased at a greater rate than those of Berisford over the past five years. He added that while Berisford's borrowings rose by £126m to £226m last year, British

Galliford profits steady

ALMOST unchanged pre-tax profits were shown by Galliford for the six months to December 31 1981.

The surplus this time was £1.30m, compared with £1.35m, on turnover reduced from £35.37m to £30.43m.

The extreme weather since December and the further tightening up of the market caused by the large drop in UK construction output in 1981, will make it very difficult to achieve an increase in profit for the full year, says Mr Peter Galliford, chairman.

The interim dividend has been lifted from an adjusted 0.5625p to 0.7p. Earnings per share moved ahead from 3.16p to 3.28p.

The profit achieved reflects the varied fortunes of the group's trading companies, says Mr Galliford. The group is engaged in building and development, civil engineering, heating and ventilating.

The engineering companies moved from the losses of last year to a modest profit, says Mr Galliford. The contracting companies performed well considering the increased pressure on margins.

The Chorley division made a good recovery, adds Mr Galliford, and the purchase of a 50 per cent interest at the end of the period in a Singapore-based company will provide a vehicle to exploit the division's expertise in that part of the world.

Blackwood Canada \$2.25m loss

Turnover of Blackwood Hodge (Canada), 74 per cent-owned subsidiary of Blackwood Hodge, improved from C\$14.75m to C\$40.32m for 1981, but the company suffered a \$4.64m turnover to a taxable loss of \$2.25m (£1m at current rates).

There was a tax credit for the period of \$1.62m, compared with a \$800,000 charge, leaving the loss at \$2.72m, against a \$1.85m surplus previously.

Loss per share is given as 17 cents (earnings of 77 cents).

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Greenfields plunges deep into red but sees return to profits

THE RATE of losses accelerated at Greenfields Leisure in the second half of the year to October 31 1981. But the directors of this retailer and wholesaler of leisurewear and camping equipment foresee a reversal of this trend, a return to profits and higher dividends.

For the 12 months under review, pre-tax losses totalled £1.7m, compared with a mid-term deficit of £652,000 and a profit of £14,000 for the last full year.

However, the directors report that the low point in the trading setback now appears to be well passed. Gross margins are being restored and results for the current year are showing a marked improvement.

Where necessary and expedient, further disposals of uneconomic retail branches will be effected in order to reduce borrowings. The directors say they are confident that the downturn experienced last year will

be reversed and that profits will be earned. It is also hoped that results for the current and future years will justify a return to dividends approaching former levels.

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Advertisement for BTR with large 'POSITIVE' text and 'That's BTR' slogan.

Advertisement for BPC omits preference, ASSOCIATES DEAL, and The Nottingham Manufacturing Company p.l.c.

Advertisement for WINTRUST PLC INTERIM STATEMENT FOR SIX MONTHS TO 30th SEPTEMBER, 1981.

Advertisement for King & Shaxson and THE TRING HALL USM INDEX.

Advertisement for BRAID GROUP MOTOR VEHICLE DISTRIBUTORS Results at a glance.

Advertisement for FUJITSU-FANUC LTD 4 1/2% Convertible Bonds 1996.

Advertisement for M. J. H. Nightingale & Co. Limited.

Companies and Markets BIDS AND DEALS

MINING NEWS

ACC share purchase details

BY JOHN MOORE, CITY CORRESPONDENT
BUSINESS interests of Mr Robert Holmes & Court, the Australian entrepreneur, revealed yesterday at the request of the Takeover Panel, the way in which they bought 825,000 ACC non-voting shares.

E & G agrees £13.7m offer from Federated

FEDERATED LAND, the property company with expanding interests in town centre shopping developments, yesterday made an agreed £13.7m bid for Estate and General Investments, the property investment and development company effectively controlled by private housebuilding concern Prowling Holdings.

Full-year net losses for Hudbay and Northgate

BY GEORGE MILLING-STANLEY
TWO LEADING Canadian natural resources companies have reported net losses for 1981, following substantial deficits for the fourth quarter.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether dividends are in fact to be paid.

Futures exchange stake for English Association

FAST-MOVING merchant bank, English Association Group, is taking a stake in the projected London International Financial Futures Exchange (LIFFE) through a new company, Mantrad.

Dawn raid on David Scott

Bill Osborne and Co launched a dawn raid on shoe-maker David Scott Group yesterday when almost the entire Northamptonshire shoe trade was attending the Harrogate shoe fair.

MMC group tin output falls

THE TIN producers in the Malaysia Mining Corporation group reported a fall in tin output of tin concentrates for the month of February.

LONDON TRADED OPTIONS table with columns for Option, Exercise price, Closing price, Vol., etc.

Wiggins Group in £1m deal with Newarthill

UNDER the terms of the fore-shaded deal with its major shareholder Newarthill, Wiggins Group is buying the current contracting activities, the plant division and associated working capital of Newarthill's Gee, Walker and Sinter subsidiary.

ANDOVER FURNITURE

Contracts have been exchanged by the joint receivers of Andover Furniture, Mr Richard Agutter and Mr Guy Parsons, of Peat, Marwick Mitchell for the sale of the chair manufacturing business at Walworth Industrial Estate, Andover, Hampshire.

Sentrust may have merger plans in mind

THE proposal by the General Mining Union Corporation (Gencor) to acquire the "odd lot" holders of less than 100 shares should either increase their holdings to 100 shares, or sell them, could be a tidying-up operation pending new developments for the investment company.

ROUND-UP

After a silence of some three months, during which the shares have remained suspended in London, Idris Hydraulic Tia has announced that Malaysia's Foreign Investment Committee has approved the proposed offer for the shares from Syarikat PKB of Malaysia.

HUNTING PET.

Hunting Petroleum Services has been notified that on March 4 Hunting Holdings sold in the market its entitlement in the current rights issue to 643,000 new ordinary shares of Hunting Petroleum, out of its entitlement to 875,000 new ordinary shares.

EUROPEAN OPTIONS EXCHANGE table with columns for Series, Vol., Last, etc.

Advertisement for Aycliffe & Peterlee featuring a large circular graphic and text: 'HOW CAN YOU IMPROVE PLANT UTILISATION COSTS AT A STROKE? CUT THE COUPON. WE'VE GOT SOMETHING TO HELP YOU WORK IT OUT.'

CURRENCIES, MONEY and GOLD

£ and \$ ease

Sterling fell in currency markets yesterday following heavy profit taking in New York on Friday. The shake out in sterling preceded today's UK Budget which should see a reduction in clearing banks' by half a point of a full point. The Bank of England may have been in the market during the afternoon just to give a steady hand.

THE POUND SPOT AND FORWARD

Table with columns: Country, Day's spread, Close, One month, Three months, Six months. Includes U.S., Canada, Germany, Denmark, Ireland, Norway, Portugal, Spain, Italy, France, Sweden, Japan, Austria, Switzerland, Belgium.

THE DOLLAR SPOT AND FORWARD

Table with columns: Country, Day's spread, Close, One month, Three months, Six months. Includes U.K., Ireland, Canada, Netherlands, Belgium, Denmark, Norway, France, Sweden, Japan, Austria, Switzerland, Australia.

CURRENCY MOVEMENTS

Table with columns: Mar. 8, Bank of England, Morgan Stanley, Currencies, % change, % change adjusted for divergence, Divergence limit.

OTHER CURRENCIES

Table with columns: Mar. 8, Note Rates, Argentina, Australia, Brazil, Canada, Hong Kong, India, Japan, Korea, Luxembourg, Malaysia, New Zealand, Saudi Arabia, Singapore, Sri Lanka, U.A.E., Yugoslavia.

EMS EUROPEAN CURRENCY UNIT RATES

Table with columns: ECU, Currency, % change, % change adjusted for divergence, Divergence limit. Includes Belgium, Denmark, France, Dutch Guilder, Italian Lira, Luxembourg, Germany, Greece, Ireland, Spain, Portugal, Austria, Switzerland, Netherlands, United Kingdom.

EXCHANGE CROSS RATES

Table with columns: Mar. 8, Pound Sterling, U.S. Dollar, Deutschmark, Japanese Yen, French Franc, Swiss Franc, Dutch Guilder, Italian Lira, Canadian Dollar, Belgian Franc.

FT LONDON INTERBANK FIXING (11.00 a.m. MARCH 8)

Table with columns: 3 months U.S. dollars, 6 months U.S. dollars, bid 14 1/16, offer 14 3/16, bid 14 1/16, offer 14 1/16.

EURO-CURRENCY INTEREST RATES (Market closing rates)

Table with columns: Mar. 8, Sterling, U.S. dollar, Canadian dollar, Dutch Guilder, Swiss Franc, West German, French Franc, Italian Lira, Belgian Franc, Japanese Yen. Includes Short term, 7 days notice, 1 month, 3 months, 6 months, 9 months, 12 months.

MONEY MARKETS

A restraining hand. London clearing bank base lending rate 13 1/2 per cent (since February 23). Short-term interest rates continued a downward trend in the London money market yesterday, but the authorities put something of a restraining hand on events by lending funds at a penal rate of 14 per cent.

GOLD

Sharp fall. Gold fell \$164 an ounce in the London bullion market yesterday to close at \$329.37. The closing level was the low for the day and its worst level since early September 1979.

LONDON MONEY RATES

Table with columns: Mar. 8, Sterling, Local, Local Auth., Finance, Discount, Treasury, Bills, Prime. Includes Overnight, 2 days notice, 7 days notice, 1 month, 3 months, 6 months, 9 months, 12 months, 18 months, 24 months, 30 months.

MONEY RATES

Table with columns: NEW YORK, GERMANY, FRANCE, JAPAN. Includes Prime, Fed funds, Treasury bills, GERMANY, FRANCE, JAPAN.

FT UNIT TRUST INFORMATION SERVICE

OFFSHORE & OVERSEAS FUNDS

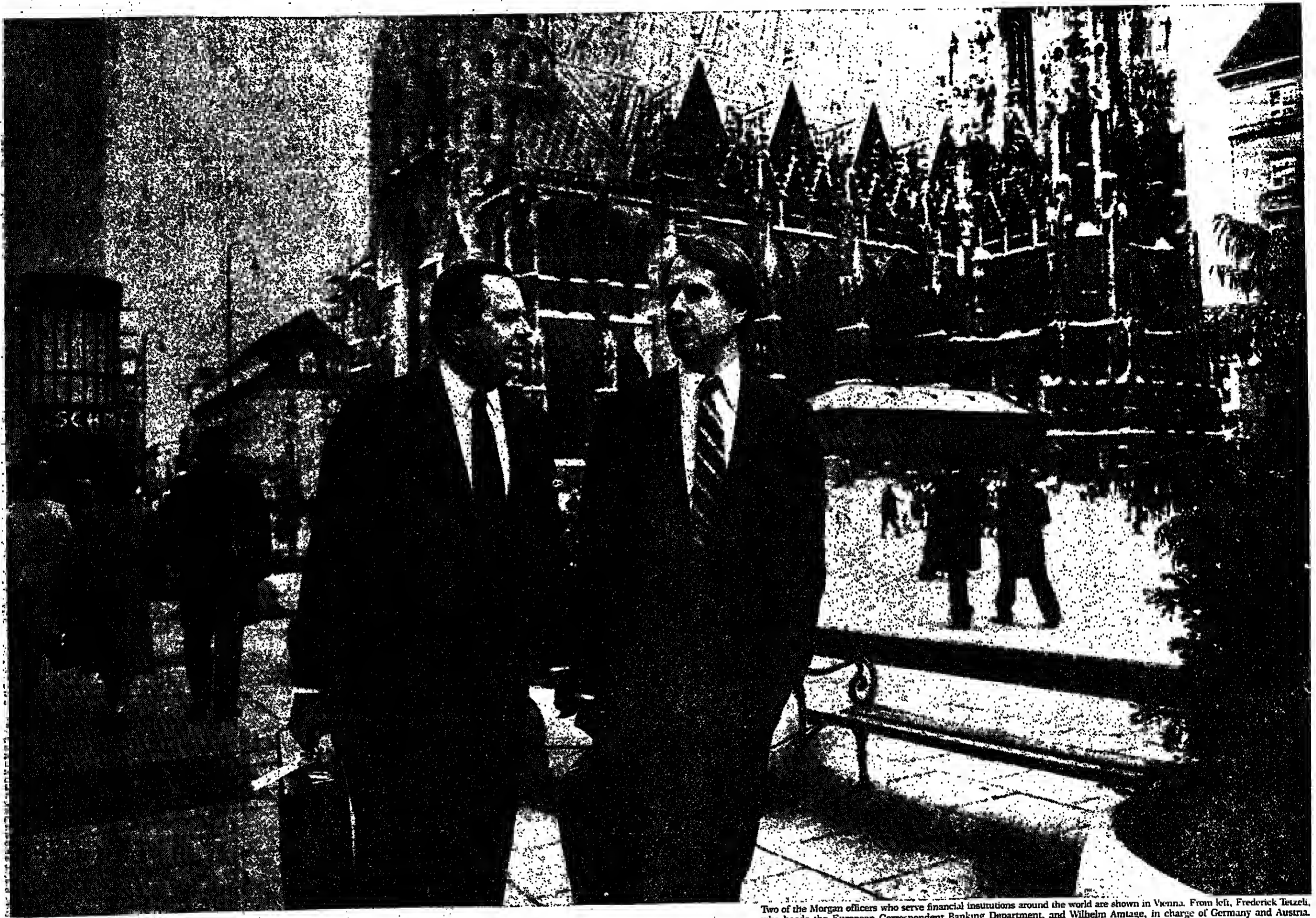
Large table listing various offshore and overseas funds, including S.G. Europe Obligations S.A., Leionold Joseph & Sons (Guernsey), King & Sherson Mgrs., and many others. Columns include fund name, manager, and other details.

BASE LENDING RATES

Table listing base lending rates for various banks and financial institutions, including Allied Irish Bank, American Express Bk., Amro Bank, and others.

Advertisement for Frank & Ockrent Limited, featuring the slogan 'We've invented the best way to find new products.' and listing various financial services and products.

Why Morgan leads all U.S. banks in international correspondent banking



Two of the Morgan officers who serve financial institutions around the world are shown in Vienna. From left, Frederick Tezich, who heads the European Correspondent Banking Department, and Wilhelm Amtage, in charge of Germany and Austria.

The Morgan Bank is a leader in serving financial institutions all over the world. In fact, Morgan ranks first among all U.S. banks in the important category of demand deposits due to foreign banks, with more than \$1.3 billion.

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 - Helping an Italian bank acquire a U.S. bank.
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For more information about how we serve financial institutions, and how we might serve you, call or write Gordon C. Wilson, Vice President, Morgan Guaranty Trust Company, 1 Angel Court, London EC2R 7AE. Telephone (01) 600-2300.

The Morgan Bank



LIBRA BANK LIMITED

EXTRACTS FROM AUDITED CONSOLIDATED ACCOUNTS

| | Year ended 31st December | | | | |
|---|--------------------------|-------------|-------------|-------------|---------------|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| | £ | £ | £ | £ | £ |
| CAPITAL AND RESERVES | 12,865,529 | 15,554,217 | 19,279,029 | 40,408,094 | 51,375,398 |
| SUBORDINATED LOANS | 2,817,860 | 7,038,561 | 9,700,367 | 20,847,215 | 43,030,039 |
| CASH AT BANKS, MONEY AT CALL AND SHORT NOTICE, CD'S | 58,006,316 | 85,364,704 | 98,001,746 | 118,853,107 | 202,291,765 |
| LOANS | 229,549,465 | 367,813,236 | 398,290,820 | 571,010,725 | 886,378,328 |
| TOTAL ASSETS | 308,872,227 | 449,369,306 | 519,132,266 | 806,632,048 | 1,245,483,761 |
| PRE-TAX PROFITS | 5,104,536 | 7,737,688 | 10,248,812 | 12,296,359* | 27,677,304 |

*Excludes an exceptional profit of £10,467,708.

Shareholders
 The Chase Manhattan Bank, N.A.
 Swiss Bank Corporation
 Bancomer S.A.
 Banco Itau S.A.
 The Royal Bank of Canada
 Westdeutsche Landesbank Girozentrale
 Credito Italiano S.p.A.
 National Westminster Bank Limited
 The Mitsubishi Bank Limited
 Banco Espírito Santo e Comercial de Lisboa

Bastion House, 140 London Wall, London EC2Y 5DN
 London, Bogota, Buenos Aires, Mexico City, New York, Panama, Santiago, Sao Paulo

Heavy financial costs hit Swedish paper group

BY WILLIAM DULLFORCE IN STOCKHOLM

BILLERUD, the Swedish pulp, paper and packaging group, yesterday reported a sharp drop in 1981 earnings to SKr 75m (\$13m) from SKr 192m in 1980. Sales rose by 9.6 per cent to SKr 3.87bn.

The board proposes to pay an unchanged SKr 7 a share dividend, although the net adjusted return is given as SKr 3.50 a share against SKr 17.40 in the previous year. The company raised its dividend in 1980 to SKr 7 from SKr 4 in 1979, having passed the dividend in 1978.

The setback at Billerud's is attributed to the effect of the general recession on the Swedish pulp, paper and timber business. A high level of capital

spending, SKr 540m last year, has also drawn heavy interest charges which pushed up net financial debts from SKr 141m to SKr 211m.

It can be deduced from the figures that the forest product operations in Sweden ran at a loss last year. By contrast Celbi, the Portuguese subsidiary, more than doubled operating profit to SKr 155m on a turnover of only SKr 355m and contributed more than half the group operating profit of SKr 285m.

This operating profit includes SKr 112m in stock appreciation. In the Swedish timber, pulp and paper business operating income tumbled

from SKr 160m to SKr 21m on sales of SKr 2.26bn. Packaging improved its operating profit slightly to SKr 65m with sales growing by 28 per cent to SKr 703m.

Billerud shows a net extraordinary income of SKr 150m, of which SKr 194m consists of the sale of electric power assets to a distribution company which it owns jointly with Uddeholm, the steel concern.

The company is more hopeful about the trading outlook in 1982. Rationalisation and the return from investments which have recently been completed will offset cost increases. At the same time the general price level for products is expected to be higher.

Norway steps up capital spending

By Fay Gjester in Oslo

NORWEGIAN industrial capital spending abroad rose by 55 per cent last year to over Nkr 1bo (\$167m), according to the Bank of Norway. The figure, which does not cover investment in foreign shipping ventures, is based on earnings licences granted by the bank. The Nkr 385m rise over 1980 reflects a number of important individual deals, like the purchase by Elkem from Union Carbide of several smelting plants. Of Nkr 560m invested in the U.S. last year, the Elkem/Union Carbide deal accounted for Nkr 360m.

After the U.S., Sweden was the country that attracted most Norwegian investment in 1981, with Norsk Hydro's acquisition of a 75 per cent stake in Supra, the Swedish fertilizer company, boosting the total considerably. Foreign investments in Norway last year reached Nkr 356m—Nkr 54m up on a year earlier.

Statistics are also available for non-residents' holdings of shares in Norway. These show that at end 1980 foreigners had shares in 1,739 Norwegian companies (including shipping companies) with a total par value of Nkr 4bn.

Jonas Oglænd, a Norwegian manufacturing company, has sold the international marketing rights for its Move-O-Matic international robot to Fairly Automation of the UK for about Nkr 8m (\$1.34m).

Ashok Leyland has record year

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT

ASHOK LEYLAND, the Indian truck and bus producer in which EL has a 50.6 per cent shareholding, had a record year in 1981 with after-tax profits reaching Rs 150m (\$15m) compared with Rs 126.5m in 1980.

Sales revenue jumped from Rs 20.43bn to Rs 26.01bn. The trading profits were Rs 2.48bn last year, against Rs 1.7bn in 1980.

The dividend was held at 20 per cent for the year. Ashok said it had to over-

come the problems associated with material supply and a labour dispute at one of its new manufacturing plants to achieve its record last year.

Vehicle sales and production increased by 2,000 or 15 per cent to 15,031.

Ashok, which employs more than 10,000 people, brought its Hosur plant into production last year and began building two other plants—at Bhandara, near Bombay, and Alwar near Delhi.

The plants will boost Ashok's

capacity to 40,000 trucks and buses a year by the late 1980s, 1982s.

EL's other Indian subsidiary, Elnore Foundries, in which it has a 69.1 per cent stake, partly held via Ashok, also improved its financial results last year.

Sales rose from Rs 165.2m to Rs 218m, the profit before tax to Rs 33.5m from Rs 24.5m while the net profit reached Rs 23.4m, up from Rs 14.6m.

Emnore, which like Ashok is based at Madras, increased output last year by more than 16 per cent to 19,510 tonnes.

Incentive profits decline

By William Dullforce in Stockholm

INCENTIVE, the Swedish investment company which controls about 20 small engineering and trading companies in process of development, reports a decline in pre-tax profit after extraordinary items from SKr 143m to SKr 120m (\$21m) last year.

The board recommends an unchanged dividend of SKr 8 a share on the ordinary stock. Under the present market outlook it estimates that the group's earnings this year will be "not considerably" better than last year's.

Group sales climbed in 1981 by over 22 per cent to SKr 4.2bn. Incentive, which belongs to the Wallenberg banking and industrial group, was founded to provide finance and management for companies with new, advanced products and ideas.

Recently incentive has expanded in the U.S. where it has 12 subsidiaries. These turned in a combined profit of SKr 25m on sales of SKr 455m last year.

In Sweden the best results last year were recorded by Carl Munters, which makes heat exchangers and dehumidifiers and has large exports, and Skega, which produces rubber components and seals.

Increased earnings from National Bank of Kuwait

BY JAMES DORSEY IN KUWAIT

NATIONAL BANK of Kuwait, the oldest and largest commercial bank in the country, has increased its net profit for 1981 by 28 per cent to KD 16m (\$58m).

Its balance-sheet total rose by 42 per cent to KD 1,956m (\$7bn) from KD 1,377m, reinforcing its position in the top five of Arab banks.

The bank, which last November took majority control of Banque Franco-Arabe d'Investissements Internationaux (Arab Bank), the Paris-based consortium bank, is proposing to pay an 18 per cent dividend.

NBK led 18 syndicated loans last year with a total value of \$1.4bn which included six Kuwaiti dinar deals with a combined value of KD 47m.

Bank of Kuwait and the Middle East has reported a 31 per cent gain in net profits to \$16m and a 35 per cent growth in assets to \$2,680m.

Kuwait banks were able to increase their activities and diversify their operations in European currency markets and international lending because of continued assistance by the Ministry of Finance, Kuwait Bank said.

Malaysian textile results reflect weak trading

BY WONG SULONG IN KUALA LUMPUR

TWO MALAYSIAN textile companies report setbacks in earnings, reflecting the difficult times which the once buoyant industry is now experiencing.

The long delisted Folex Industries suffered a net loss of 4.25m ringgit (\$1.5m) for the year ended August 1981. South Pacific textiles saw net profit fall by more than 45 per cent to 2.7m (\$1.2m) ringgit for the year ended September.

However, sales were 18 per cent higher at 40m ringgit, and South Pacific is at least main-

taining its final dividend at 30 per cent.

Folex directors say the future of the company, which now has an accumulated loss of over 34m ringgit, lies in the major capital reconstruction scheme approved by shareholders last year.

However, the scheme is being withheld, apparently because the authorities are not prepared to allow a relisting of Folex shares since the company is still heavily in the red.

Fidis to quadruple net profits

By James Buxton in Rome

FIDIS, a financial holding company controlled by Fiat with stakes in Italian finance and industry, is expected to announce quadrupled net profits of 1,200m (\$150m) for 1981 and gross profits of 1,320m.

The increased profitability has come in part from a reorganisation of Fidis in the past two years. This included a rise in capital from 1,150m to 1,125m and the transfer to Fidis of certain important assets, including a 25 per cent stake in Weber, one of Fiat's major components suppliers.

Bonds issued by Fidis are now quoted on the Milan Stock Exchange and will be convertible for one month each year starting this June. By 1986 Fiat's stake in Fidis, which is currently 100 per cent, should drop to about 40 per cent.

The portfolio of Fidis is valued at about 1,160bn of which some 1,600m is in financial holding companies. 1,700m in industry, and some 1,300m in property. It is the vehicle for Fiat's stakes in such companies as Pirelli and Olivetti.

Last year Fidis took an important stake in Montedison, the troubled chemical company, through a consortium of private companies called Gemina. It also subscribed to the large increase in Montedison's capital.

NEW ISSUE These debentures having been sold, this advertisement appears as a matter of record only.

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February 1982

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Dresdner Bank Aktiengesellschaft

Manufacturers Hanover Limited

Société Générale de Banque S.A.

Union Bank of Switzerland (Securities) Limited

March 8, 1982

INTERNATIONAL APPOINTMENTS

Chicago Board Options Exchange posts

THE CHICAGO BOARD OPTIONS EXCHANGE has promoted five exchange officials to its board of directors.

Mr Joseph Duhamel, head of the exchange's computer systems operations and formerly senior vice-president, was named an executive vice-president.

Mr John Gill, formerly assistant vice-president, market regulation, was named a vice-president. Mr Gill's responsibilities will remain in the regulatory area.

Mr Rocco Freda was appointed an assistant vice-president in the exchange's systems division. He was director, systems liaison, based in the New York office.

Mr Stanley Schreier, director, trade processing operations, was named an assistant vice-president in the systems division.

Mr Thomas Thrall was appointed an assistant vice-president in the floor operations division. He was director, management information systems.

GULF RESOURCES AND CHEMICAL CORPORATION, Houston, Texas, has appointed Mr John H. Lollar as executive vice-president-operations.

He has served as president of Gulf's subsidiary Penn Oreille Oil and Gas Company since 1977 and has also served in the additional post of president of BS&B Engineering Company, also a subsidiary of Gulf, since February 1981.

Two associated appointments were announced at Penn Oreille Oil and Gas Company. Mr Wilbur L. Stevenson has been appointed president. He has served as vice-president, exploration of Penn Oreille since 1977.

Mr Glenn W. Patterson was appointed executive vice-president, drilling and production. He joined Penn Oreille in 1976.

Mr Carl W. Wilson, Jr has been appointed to succeed Mr Lollar as president of BS&B Engineering Company, which specialises in oil and gas process engineering services.

Mr William T. Herndon has joined SECURITY PACIFIC NATIONAL BANK as senior vice-president for operations in the international banking group. He was formerly with Citibank

NA, most recently as vice-president in the Northern European region based in London.

Mr Osvaldo Agatiello, representative of BANCO DE LA NACION ARGENTINA in Tokyo, has been appointed representative of the bank in Frankfurt in succession to Mr G. Besse, who is returning to Buenos Aires to the head office international division.

In Melbourne, Florida, HARRIS SEMICONDUCTOR has split its digital products division, isolating its CMOS and bipolar product groups into separate profit centres.

Dr Robert M. Brill, previously vice-president of research and development engineering, has been named general manager of the newly-formed CMOS digital products division. Mr Stanley Rosenberg has been named vice-president-general manager of the new bipolar digital products division.

Dr Joseph E. Rowe succeeds Mr Rosenberg as vice-president-general manager of the semiconductor programs division. Dr Rowe was previously head of the Harris controls division.

Mr Charles V. Larson has joined BANKERS TRUST CO. as vice-president in mergers and acquisitions group of the corporate finance services department. He was with the investment banking unit of Sixth Eastman Palace Webster Inc.

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ILLINOIS NATIONAL BANK and TRUST COMPANY OF CHICAGO. Mr Schueppert is based in Paris and is a division head in multinational banking services.

Mr Richard Strauss, President of Balston, Inc., has been appointed a director of WESTMAN REEVE ANGEL. He is chief executive of the Balston division which manufactures and markets high efficiency gas and liquid filtration.

Mr James P. Heffernan has been named vice-president of GENERAL INSTRUMENT CORPORATION (GILNYSSE). He will initially be responsible for the corporate staff functions of plant engineering, fleet administration and quality control.

Mr Gerald R. Ford, former President of the United States, has been elected to the board of AMERICAN EXPRESS COMPANY. Mr Ford is also a member of the board of directors of Shearson/American Express Inc. which merged with American Express in June 1981.

BANQUE ARABE ET INTERNATIONALE D'INVESTISSEMENT, Paris, has appointed Mr Daniel Bondevilla as director of the credit department, and Mr Bertrand Delafre as head of data processing and organisation. Mr Bondevilla comes from the Banque Nationale de Paris, and Mr Delafre was previously manager in the consulting division of Arthur Andersen and Cie, Paris.

Mr Michael Gleeson-White has been appointed a director of WEEKS PETROLEUM to fill the unexpired term of the late Sir Oscar Meyer. Mr Gleeson-White is a director of Weeks Australia and was a director of J. Henry Schroeder, Wages and Co. and chairman of Schroeder, Darling and Company Holding. He resides in Sydney, Australia.

Mr Frank J. Nelson will head a new exploration office in Santiago, Chile, for FREEPORT CHILEAN EXPLORATION COMPANY, a unit of Freeport-McMoran Inc. He has been appointed executive vice-president and general manager of the new company.

NATOMAS CO., San Francisco, has appointed Mr J. Herbert Gaul as company treasurer.

Mr Charles V. Larson has joined BANKERS TRUST CO. as vice-president in mergers and acquisitions group of the corporate finance services department. He was with the investment banking unit of Sixth Eastman Palace Webster Inc.

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Companies and Markets INTL. COMPANIES & FINANCE

JAPAN TO DISCONTINUE INTEREST SUBSIDIES

Shipowners forecast record profits

BY YOKO SHIBATA IN TOKYO

THE JAPANESE Government is to discontinue from April 1 the interest rate subsidy for domestic shipping lines which order locally made ships.

before the sharp downturn in the market last summer. It also benefited on dollar denominated freight charges from the yen's depreciation.

The ship ordering plans of Japanese lines for fiscal 1982 are not yet finalised but the orders are likely to shrink considerably from a year ago because of the termination of the interest subsidies.

The ship ordering plans of Japanese lines for fiscal 1982 are not yet finalised but the orders are likely to shrink considerably from a year ago because of the termination of the interest subsidies.

Guthrie Sri Lanka plan in doubt

BY WONG SULONG IN KUALA LUMPUR

A PLAN by Guthrie, the U.K. incorporated but now Malaysian owned plantation giant, to develop a 24,000 acre palm estate in Sri Lanka is now in doubt following opposition from influential quarters on the island.

taxes for the next 15 years. The deal was negotiated before Guthrie was taken over by Permodalan Nasional, the Malaysian government investment agency last September.

another area outside the Mahaveli River basin for Guthrie, although it is difficult to find a suitable piece of similar size elsewhere.

Advance by Siemens India

By R. C. Murthy in Bombay

SIEMENS INDIA has increased profits by 33 per cent in the year to September 1981, the first year after restructuring its activities to fulfil the conditions laid down by the Reserve Bank of India under the Foreign Exchange Regulations Act.

Further growth for Albaab

By Mary Frings in Bahrain

NET PROFITS of Al Bahrain Arab African Bank (Albaab) which is 60 per cent owned by Arab African Bank of Cairo, rose by 62 per cent in 1981 to U.S.\$11.56m.

Goodwood Park Hotel lifts earnings and payout

BY GEORGIE LEE IN SINGAPORE

GOODWOOD PARK HOTEL, Singapore's major hotel group, has reported a 37.7 per cent improvement in group pre-tax profits to \$831.7m for the year to September 1981.

match the performance of the parent. Pre-tax profits were little changed at \$4.66m and post-tax profits were marginally lower at \$2.67m.

THE BANKER March 1982 issue includes:

- * Has monetarism failed?
* Inflation tax
* Internationalisation of the Yen
* US Bank deregulation
* International corporate finance
* Royal Bank decision - the wider issues
* Retail banking survey
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Acrow to top forecast

By Jim Jones in Johannesburg

ACROW ENGINEERS, the South African manufacturer of steel storage equipment, cranes and construction equipment, which first gained a Johannesburg stock exchange listing last September, expects to beat its forecast of earnings of R2.2m for the year to June 30, 1982.

ENERGY RESOURCES & SERVICES INCORPORATED Net Asset Value 28th February 1982 \$7.64 per share (unaudited)

STOCKHOLDERS FAR EAST INVESTMENTS INC. Net Asset Value 28th February 1982 \$1.85 per share (unaudited)

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US \$75,000,000 Guaranteed Floating Rate Notes 1990 Convertible until 1983 into 10 1/2 per cent Guaranteed Bonds 1990



Standard Chartered Bank Limited

In accordance with the provisions of the Notes, notice is hereby given that for the six months period (184 days) from 9th March, to 9th September, 1982 the Notes will carry interest at the rate of 14 3/4 per cent per annum.

J. Henry Schroder Wagg & Co. Limited Agent Bank

Province of Ontario \$200,000,000 15 3/4% Notes Due February 25, 1992. List of participating financial institutions including Salomon Brothers Inc, Wood Gundy Incorporated, Merrill Lynch White Weld Capital Markets Group, etc.

30 seconds is a long time in a dealing room. The new Reuter Money Dealing Service gives you, on your Reuter screen, dealer-to-dealer contact within four seconds. Includes a list of cities and a Reuter terminal image.

WORLD STOCK MARKETS

Opening Wall St rally eroded

A GOOD deal of a strong opening rally on Wall Street yesterday was lost by mid-session, as initial euphoria over an interest rate cut gave way to continuing concern about the outlook for the U.S. recession.

The Dow Jones Industrial Average, which showed a recovery of 9.52 at the 10.30 am calculation, was up only a net 2.67 at 810.03 by 1 pm.

The NYSE All Common Index was up 1.27 from 4,417.25 to 4,428.52 on a balance after touching 4,438.88, while gains outscored declines by eight-to-five at mid-session.

There was a large turnover of 44.2 million shares but fell short of Friday's 1 pm figure of 47.82m.

Analysts attributed the initial rise in the market to a cut in the Prime Rate to 16 per cent from 16 1/2 by several major banks.

However, analysts said investors are still pessimistic about the outlook for the economy and the longer-term prospects for interest rates.

Analysts noted that the large Federal deficit projected for next year continues to worry investors, as it will require increased Federal borrowing, which could place upward pressure on interest rates.

The sharp drop in gold and silver prices was reflected in Precious Metals stocks. ASA was up 1 1/2 to 23 1/2, Homestake 1 1/2 to 21 1/2, Newmont 1 1/2 to 63 1/2 and Placer Dome 1 1/2 to 21 1/2.

THE AMERICAN SE Market Index was up 0.35 at 250.34 at 11 am, after rising to 253.23 at 11 am. Volume 3.71m shares.

Markets were easier inclined at mid-day after a fair trade, with Golds leading the weakening.

Closing Prices for North America were not available for this edition.

Germany Bond prices were mixed to firm in quiet trading. Again.

Gold was mixed after a firmer performance by Gold Bullion in Hong Kong. Central Bank of England raised 2 1/2 to 324.6 and Oil and Gas 10.8 to 397.5.

Overall market leader BHP, last week the subject of intensive selling which cut 86 cents off its price, recovered 18 cents at 457.62, while CSR retrieved 8 cents at 453.06.

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Companies and Markets

NEW YORK

Table with columns: Stock, Mar. 8, Mar. 9. Lists various stocks like ACF Industries, AM Int'l, ARA, etc.

Table with columns: Stock, Mar. 8, Mar. 9. Lists various stocks like Aicon, Amal Sugar, Amstar, etc.

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Commodities and Markets

COMMODITIES AND AGRICULTURE

Bonn in doubt on cocoa levy

BONN—West Germany has not finally decided on its attitude to a possible increase in the International Cocoa Organisation (ICCO) buffer stock contribution levy to 3 cents from the present 2c, government officials said here yesterday.

The decision, to be made this week, before the ICCO council meeting begins on March 15, will largely depend on the outcome of a meeting of the EEC's raw materials committee in Brussels on Thursday.

The committee meeting will show whether West Germany's EEC partners are still fully behind a further levy increase or whether they will concur with the German view that there is no urgent need to increase the levy.

Decline in gold hits base metal prices

BY JOHN EDWARDS, COMMODITIES EDITOR

BASE METAL prices came under renewed pressure yesterday following the further decline in gold, platinum and silver.

The prices continued to be sustained by support buying, believed to be on behalf of the International Tin Council buffer stock.

At the first day of the special emergency meeting of the International Tin Council in London yesterday it was reported that consumers had opposed a producer proposal to introduce export controls.

Other meeting may also be held to review the market situation prior to the scheduled routine meeting already fixed for April 20 to 23.

The enormity of the buffer stock's task in keeping prices up was highlighted yesterday when it was revealed that tin stocks held in the London Metal Exchange last week jumped by 9,135 tonnes to a massive total of 37,175 tonnes.

In the circumstances, the London Metal Exchange has decided not to go ahead with asking ring-dealing members for details of their tin positions and are expected this week formally to lift the £20 a tonne limit on cash tin for delivery following day, imposed last month.

Reuter reported from Lima that miners at the Southern Peru Cuzco mines had postponed for a week the "indefinite strike" that was due to start yesterday.

Lead values were hit by both the decline in copper and a rise in warehouse stocks of 2,530 to 66,675 tonnes.

Aluminium stocks rose again as well, by 2,200 to 182,575 tonnes of 420 to 1,302 tonnes, kept prices up on fears of a supply squeeze.

Free market platinum followed the downward trend in gold and silver, losing 25.19 to 2173.00 a troy ounce.

The dollar quotation was \$13.25 down to \$13.15 an ounce, its lowest level for nearly four years and well below the South African producer price of \$475.

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Speculators boost coffee market

By Our Commodities Staff

A NEW wave of speculative buying boosted London coffee futures prices to the highest levels for 21 months yesterday.

The May quotation reached 11,365 a tonne at one stage before ending the day 420 up at £1,353.5 a tonne.

Dealers said there were no new fundamental developments to explain the rise, which they attributed to a continuing shortage of supplies available for nearby delivery coupled with widespread switching of speculative activity from other markets.

In spite of the strength of the market, trading was fairly light, they noted.

Late last month rising prices triggered the release of an extra 672,000 bags (50 kilos each) of coffee export quotas for the 1981/82 season under the International Coffee Agreement.

But this seems to have had little effect on market sentiment.

Higher Cuban sugar output forecast

By Our Commodities Staff

A FORECAST of higher Cuban output encouraged another sharp decline in world sugar prices on the London futures market yesterday.

The August position ended the day 47.5 down at 159.45 a tonne after the London daily raw sugar price was fixed £3 lower at 156.2 a tonne in the morning.

In his latest International Sugar report, published yesterday, F. O. Licht, the West German sugar analyst, said Havana officials had predicted this year's Cuban output at 7.6m to 7.8m tonnes, up from 7.3m last season.

He added, however, that much would depend on the efficiency with which the closing stages of the harvest were conducted.

SOUTH AFRICAN MAIZE

Farmers get tough on export policy

BY BERNARD SIMON IN JOHANNESBURG

THE SOUTH African government has been drawn into a bitter dispute over efforts by the country's maize farmers to make sweeping changes in maize export policies.

Last November, the board headed by the minister of agriculture, the board's chairman, Mr Crawford van Abo, telephoned officials from Chicago instructing them to withdraw cargoes from the tender, after prices offered by the international trading houses were considered too low.

South Africa is the world's third largest maize exporter. Shipments totalled 5.3m tonnes last year and are expected to come close to that level in 1982, in spite of an anticipated fall in the crop from 14.2m tonnes.

The maize industry is also the country's most important farming sector.

The present dispute has its origins in the election last year of a new Maize Board dominated by members of the National Maize Producers Organisation (Nampo), a group of hard-driving farmers who believe that previous boards have sold maize farmers short.

The new board is turning the industry upside down, doing its best to sweep aside many traditional marketing but also government policies such as the official encouragement of import substitution.

Hedging

Boasting that "we're wheeling and dealing on a scale that is unknown in South Africa, one Nampo official concedes that "the government is not bappy."

One of the board's first steps was to start hedging part of the maize crop on futures markets. It unexpectedly closed a forward contract before maturity, realising a windfall profit of R1.3m.

More recently, the board has made revolutionary changes in the twice-weekly tender system used to sell maize for export. In terms of this system, a predetermined number of cargoes is sold to the highest bidder at a secret tender.

According to other traders, Japanese manufacturers of animal feed—among the largest buyers of South African maize—are particularly worried.

Taiwan recently signed a contract with the Maize Board for the supply of 1.5m tonnes of maize over the next three years, but the Taiwanese are understood to have refused a board request to increase the contractual quantities.

One result of the disruption in supplies, the traders say, may be to narrow the premium which foreign customers are willing to pay for high-quality South African maize. Prices are currently around \$12 to \$13 a tonne above those for U.S. maize.

According to Mr Ferreira, "Some shippers have turned away business for South African maize."

The Nampo men, who have cash of the 13 seats on the Maize Board, are under fire by the critics. They are increasingly by-passing their board members and have pushed through a resolution giving the board authority to use methods other than the tender system in sell maize. The resolution still requires approval by the Minister of Agriculture.

New facilities

As part of its efforts to increase exports, Nampo is pressing the government to build a new maize silo at Richards Bay, north of Durban, at present almost all South African maize is shipped through East London, which is further than Richards Bay from the main maize growing areas. Nampo argues that facilities at Richards Bay would have allowed a virtual doubling of exports last year.

Nampo is also moving with the idea of importing tractors from Italy and Romania at a lower cost than locally assembled items. It concedes, however, that the authorities may not be keen to approve import permits.

The government is watching the developments anxiously. "If there should be a chance, the Minister must approve," the Department of Agriculture official says. "The Maize board cannot go it alone."

Report on Florida citrus damage

NEW YORK—Orange trees in the south-east portion of the Florida citrus belt were hit hardest by a damaging freeze there in January, according to a survey by Florida Citrus Mutual, the growers' group.

In those areas and other isolated groves where the coldest temperatures were recorded, some trees have already died and others will require extensive pruning. But mild weather since the January 12 freeze has promoted "excellent recovery" in most areas the group said.

More funds for rubber stock

BY WONG SUI LONG IN KUALA LUMPUR

THE International Natural Rubber Organisation (INRO) is to call up a third round of financial contributions from member countries to buy up surplus rubber.

Intro chairman, Mr Jack Sumner, indicated at the end of a special council session over the weekend that the call-up would be over \$M200m (U.S.\$124m) and bring total contributions since last October to \$M500m.

Mr Sumner admitted that contrary to earlier forecasts, the price of rubber had continued to remain depressed in spite of purchases by Inro's buffer stock amounting to over 100,000 tonnes.

"It is the considered view of the council that an additional purchase of a substantial quantity will be required to meet actively the objectives of the international natural rubber agreement," he said.

Unconfirmed market reports said that the council had approved a third round of contributions from Malaysia, that the buffer stock manager be allowed to buy futures.

He has so far been authorised to buy only physical rubber but producers felt the Inro's support operation could be more effective if the manager has the discretion to buy futures as well.

Mr Sumner said the council unanimously agreed the buffer stock manager "must employ all methods available in established rubber markets to impart real strength and confidence in the markets."

The meeting also agreed to the EEC's request for its ratification of the INRO agreement to be extended from February 23 to April 15.

A vote of 80 per cent from both the producers and consumers is needed for the agreement to come into force.

Sumner said Thailand has notified that it would ratify by April 15, and similar pledges had been received from some consuming members.

The producers, led by Malaysia, who want an increase in the buffer stock price range, acceded to built-in clauses in the agreement excluding any upward revision at this time.

Yun Sri B. C. Sekhar, head of the Malaysian delegation, said that Malaysia had not changed its position on the desirability of changing the price levels, but there was a question of priority.

James Todd, head of the U.S. delegation, stressing the American commitment to the agreement, said the U.S. is ready to meet the contribution for the third call-up. "I think there is a great deal of confidence in the agreement," he said.

BRITISH COMMODITY MARKETS

BASE METALS

Table with columns for metal type (Copper, Lead, Zinc, Tin, Nickel, Silver), price per unit, and change. Includes sub-sections for High Grade and Low Grade.

COPPER

Table showing copper prices for various grades and quantities, including high grade and low grade.

ZINC

Table showing zinc prices for various grades and quantities.

NICKEL

Table showing nickel prices for various grades and quantities.

LEAD

Table showing lead prices for various grades and quantities.

TIN

Table showing tin prices for various grades and quantities.

SILVER

Table showing silver prices for various grades and quantities.

WHEAT

Table showing wheat prices for various grades and quantities.

SOYABEAN MEAL

Table showing soyabean meal prices for various grades and quantities.

PRICE CHANGES

Table showing price changes for various commodities, including metals, oil, and grains.

ALUMINUM

Table showing aluminum prices for various grades and quantities.

ZINC

Table showing zinc prices for various grades and quantities.

COCAOA

Table showing cocoa prices for various grades and quantities.

WHEAT

Table showing wheat prices for various grades and quantities.

WOOL FUTURES

Table showing wool futures prices for various grades and quantities.

MEAT/VEGETABLES

Table showing meat and vegetable prices for various grades and quantities.

PERSONAL

Advertisement for Krugerrands Sovereigns, featuring gold coins and investment options.

Promotional Gifts

Advertisement for promotional gifts, including pens, paperweights, and cufflinks.

COFFEE

Table showing coffee prices for various grades and quantities.

RUBBER

Table showing rubber prices for various grades and quantities.

TEA AUCTION

Table showing tea auction prices for various grades and quantities.

POTATOES

Table showing potato prices for various grades and quantities.

DIABETES

Advertisement for diabetes treatment, including insulin and medical supplies.

IN LIVING MEMORY

Advertisement for memorial services and funeral arrangements.

COTTON

Table showing cotton prices for various grades and quantities.

JUTE

Table showing jute prices for various grades and quantities.

GRIMBOY FISH

Table showing grimboy fish prices for various grades and quantities.

INDICES

Table showing various financial indices and market performance.

AMERICAN MARKETS

Table showing American market prices for various commodities.

EUROPEAN MARKETS

Table showing European market prices for various commodities.

INDICES

Table showing various financial indices and market performance.

REUTERS

Table showing Reuters market data and news snippets.

AUTHORISED UNIT TRUSTS

Table listing various unit trusts such as Abbey Unit Trst. Mgrs. (a), Abbey Unit Trst. Mgrs. (b), and others, including their managers and details.

Table listing unit trusts under the heading 'Lloyds Unit Trst. Mgrs. Ltd. (a)', including Lloyds Unit Trst. Mgrs. Ltd. (a) and various sub-funds.

Table listing unit trusts under the heading 'Saver & Prosper Group - Cont.', including Saver & Prosper Group - Cont. and various sub-funds.

Table listing unit trusts under the heading 'Barclays Life Assur. Co. Ltd.', including Barclays Life Assur. Co. Ltd. and various sub-funds.

Table listing unit trusts under the heading 'Guardian Royal Exchange', including Guardian Royal Exchange and various sub-funds.

Table listing unit trusts under the heading 'Schroder Life Group', including Schroder Life Group and various sub-funds.

FT UNIT TRUST INFORMATION SERVICE

INSURANCE BONDS

Table listing insurance bonds from various providers like Abbey Life Assurance Co. Ltd., Abbey Life Assurance Co. Ltd., and others.

NOTES: Prices are in pence unless otherwise indicated. Values are shown in pence unless otherwise indicated.



BRITISH FUNDS

Table of British Funds with columns for Name, Price, and Yield. Includes sub-sections for 'Shorts' (Lives up to Five Years) and 'Five to Fifteen Years'.

Table of Five to Fifteen Years funds, listing various investment vehicles and their performance metrics.

Table of Over Fifteen Years funds, detailing long-term investment options.

Table of Undated funds, listing funds without specific maturity dates.

Table of INT. BANK AND O'SEAS GOVT. STERLING ISSUES, listing international government securities.

Table of CORPORATION LOANS, listing various corporate debt instruments.

Table of COMMONWEALTH AND AFRICAN LOANS, listing loans from commonwealth and African nations.

Table of LOANS Public Bond and Ind., listing public and industrial loan options.

FT SHARE INFORMATION SERVICE

LOANS—Continued

Table of Loans—Continued, listing various loan products and their terms.

BANKS & H.P.—Cont.

Table of Banks & H.P.—Cont., listing bank shares and related products.

CHEMICALS, PLASTICS—Cont.

Table of Chemicals, Plastics—Cont., listing shares in chemical and plastic industries.

ENGINEERING—Continued

Table of Engineering—Continued, listing shares in engineering firms.

FOREIGN BONDS & RAILS

Table of Foreign Bonds & Rails, listing international bonds and rail shares.

AMERICANS

Table of Americans, listing shares in American companies.

BEERS, WINES AND SPIRITS

Table of Beers, Wines and Spirits, listing shares in beverage companies.

BUILDING INDUSTRY, TIMBER AND ROADS

Table of Building Industry, Timber and Roads, listing shares in construction and infrastructure.

BANKS AND HIRE PURCHASE

Table of Banks and Hire Purchase, listing shares in financial institutions.

CANADIANS

Table of Canadians, listing shares in Canadian companies.

DRAPERY AND STORES

Table of Drapery and Stores, listing shares in retail and clothing companies.

ELECTRICALS

Table of Electricals, listing shares in electrical engineering companies.

FOOD, GROCERIES, ETC.

Table of Food, Groceries, Etc., listing shares in food and grocery companies.

MACHINE TOOLS

Table of Machine Tools, listing shares in manufacturing and tool companies.

CHEMICALS, PLASTICS

Table of Chemicals, Plastics, listing shares in chemical and plastic companies.

ENGINEERING

Table of Engineering, listing shares in engineering companies.

FOOD, GROCERIES—Cont.

Table of Food, Groceries—Cont., listing shares in food and grocery companies.

HOTELS AND CATERERS

Table of Hotels and Caterers, listing shares in hospitality companies.

INDUSTRIALS (Miscel.)

Large table of Industrials (Miscel.), listing a wide variety of industrial shares.

RIGGS U.S. Dollar C.D.'s advertisement text.

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INDUSTRIALS—Continued

Table of industrial stocks including companies like British Petroleum, Shell, and ICI, with columns for stock price, change, and volume.

LEISURE—Continued

Table of leisure stocks including companies like British Airways, British Telecom, and British Gas.

PROPERTY—Continued

Table of property stocks including companies like British Land, Wimpey, and Taylor Woodrow.

INVESTMENT TRUSTS—Cont.

Table of investment trusts including companies like British Venture, British Venture Income, and British Venture Growth.

OIL AND GAS—Continued

Table of oil and gas stocks including companies like British Petroleum, Shell, and Esso.

NOMURA The Nomura Securities Co., Ltd. Japan's leading international securities and investment bank.

MINES—Continued

Table of mine stocks including companies like Anglo-American, Anglo-Australian, and Anglo-Asian.

MOTORS, AIRCRAFT TRADES

Table of motor and aircraft trade stocks including companies like British Leyland, British Aerospace, and British Airways.

SHIPPING

Table of shipping stocks including companies like British Shipbuilders, British Overseas Airways, and British Overseas Airways.

SHOES AND LEATHER

Table of shoes and leather stocks including companies like British Shoe Manufacturers, British Leather, and British Shoe.

SOUTH AFRICANS

Table of South African stocks including companies like Anglo-American, Anglo-Australian, and Anglo-Asian.

TEXTILES

Table of textile stocks including companies like British Textiles, British Wool, and British Cotton.

NEWSPAPERS, PUBLISHERS

Table of newspaper and publisher stocks including companies like British Newspapers, British Publishers, and British Media.

PAPER, PRINTING ADVERTISING

Table of paper, printing, and advertising stocks including companies like British Paper, British Printing, and British Advertising.

TOBACCO

Table of tobacco stocks including companies like British Tobacco, British Cigarettes, and British Pipes.

TRUSTS, FINANCE, LAND

Table of trusts, finance, and land stocks including companies like British Trusts, British Finance, and British Land.

PROPERTY

Table of property stocks including companies like British Land, Wimpey, and Taylor Woodrow.

INSURANCE

Table of insurance stocks including companies like British Insurance, British Life, and British Pensions.

LEISURE

Table of leisure stocks including companies like British Airways, British Telecom, and British Gas.

OVERSEAS TRADERS

Table of overseas trader stocks including companies like British Overseas, British International, and British Global.

RUBBERS AND SISALS

Table of rubber and sisal stocks including companies like British Rubber, British Sisal, and British Latex.

TEAS

Table of tea stocks including companies like British Tea, British Ceylon, and British Darjeeling.

MINES

Table of mine stocks including companies like Anglo-American, Anglo-Australian, and Anglo-Asian.

REGIONAL MARKETS

Table of regional market stocks including companies like British Regional, British Local, and British Community.

3-MONTH Call Rates

Table of 3-month call rates for various currencies and locations.

Options

Table of options for various stocks and currencies.

Recent Issues

Table of recent issues for various companies and governments.

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